

BILLINGS



WRENCHES AND SHOP TOOLS



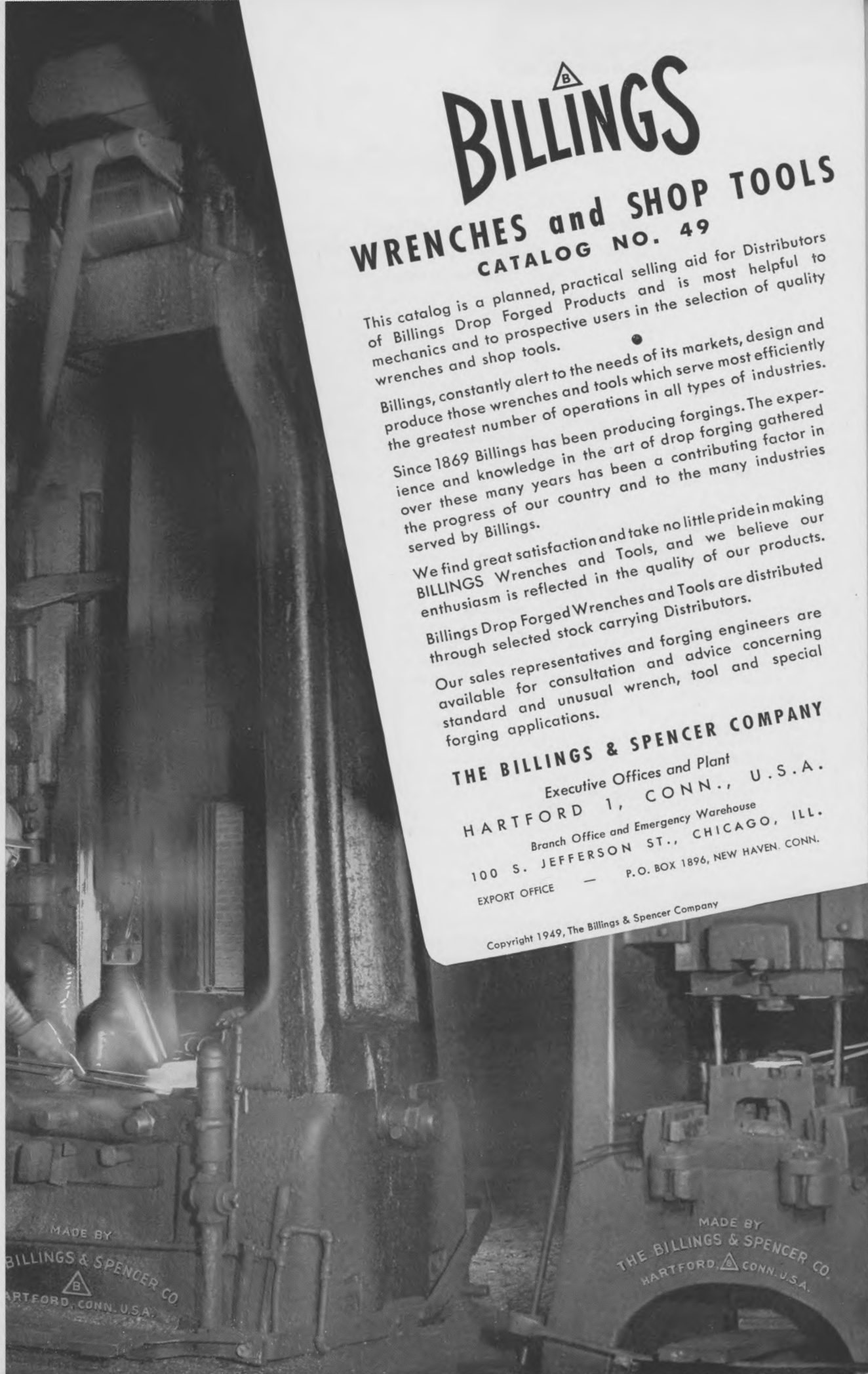
CATALOG 49

THE BILLINGS & SPENCER CO., HARTFORD 1, CONN., U.S.A.

**SPECIAL
NOTICE**

REINSTATED ITEMS

Shown on Catalog Page 99



BILLINGS

WRENCHES and SHOP TOOLS CATALOG NO. 49

This catalog is a planned, practical selling aid for Distributors of Billings Drop Forged Products and is most helpful to mechanics and to prospective users in the selection of quality wrenches and shop tools.

Billings, constantly alert to the needs of its markets, design and produce those wrenches and tools which serve most efficiently the greatest number of operations in all types of industries.

Since 1869 Billings has been producing forgings. The experience and knowledge in the art of drop forging gathered over these many years has been a contributing factor in the progress of our country and to the many industries served by Billings.

We find great satisfaction and take no little pride in making BILLINGS Wrenches and Tools, and we believe our enthusiasm is reflected in the quality of our products.

Billings Drop Forged Wrenches and Tools are distributed through selected stock carrying Distributors. Our sales representatives and forging engineers are available for consultation and advice concerning standard and unusual wrench, tool and special forging applications.

THE BILLINGS & SPENCER COMPANY

Executive Offices and Plant

HARTFORD 1, CONN., U.S.A.

Branch Office and Emergency Warehouse

100 S. JEFFERSON ST., CHICAGO, ILL.

EXPORT OFFICE

P.O. BOX 1896, NEW HAVEN, CONN.

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MADE BY
BILLINGS & SPENCER CO.
HARTFORD, CONN. U.S.A.

MADE BY
THE BILLINGS & SPENCER CO.
HARTFORD, CONN. U.S.A.

When Ordering

BE SPECIFIC — it facilitates efficient handling and prompt delivery. Specify the "Model" and the correct catalog "Class No." of the items to be ordered. Specify the "Finish" or "Pattern" or "Style" if more than one is listed. WHEN ORDERING is the time to be specific — it assures the correct mutual understanding of your requirements.

DIMENSIONS

Unless otherwise stated, all dimensions are in "inches". Milled or broached opening sizes actually are slightly larger than the nominal openings listed to allow for proper workable clearance.

PACKAGING

Billings' Drop Forged Products get to you and to your customer in good condition and can be kept in good condition because of the rugged, metal edge fibre-board boxes, with the attention compelling all over design in which Billings' Wrenches and Shop Tools are packaged. The boxes are distinctively "Billings". The attractive orange color of the inside box makes an ideal display background for the wrenches and tools.

LABELS

Another important mark of distinction — a quickly identified, easily read label giving all the information necessary for efficient stocking, inventory work and re-ordering. YELLOW LABELS identify Billings' "Carbon Steel Products". GREEN LABELS identify Billings' "Vitalloy Forged® Products".

SHIPPING CASES

Substantially constructed and made of selected, light weight straight grain wood. Extra heavy shipments have wire binding for reinforcement. For Export Ship-

ments the packages have double protection against moisture and are packed in solidly constructed wooden cases secured and marked to conform to shipping regulations.

SPECIAL OPENINGS

When specified, special openings will carry an extra charge covering the cost of setting-up machines unless the quantity ordered is sufficiently large to absorb this set-up cost.

SPECIAL WRENCHES MADE TO ORDER

Our engineers and factory trained representatives will gladly consult and advise when other than stock wrenches are needed for special application.

BILLINGS DISTRIBUTORS

Billings Wholesale Hardware and Industrial Supply Distributors are stock carrying distributors maintaining sufficient items to cover their particular types of trade and territory.

We urge that purchase orders for Billings Drop Forged Products be directed to these distributors for efficient, economical and satisfactory service.

DROP FORGINGS OF EVERY DESCRIPTION

Since 1869 our Forging Division has been producing drop forgings of every description for all types of industries. Your inquiry accompanied by drawings and specifications of special industrial forgings will receive prompt reply from our Forging Division.

TERMS: See page 100.

Billings Guarantee

Every Billings' drop forged product — standard stock catalog item or special forging made to order — is guaranteed to be free from imperfection in workmanship and in material. Any product found to be defective, as above stated, will be gladly replaced, without charge.

WRENCHES

Page

WRENCHES, VITALLOY® FORGED

BOX

Double Hex Long 15°

No. 7723-7742B

26

Double Hex Long 45°

No. 8723-8053

27

Double Hex Short 15°

No. 6723-6727

26

Double Hex Short 45°

No. 9723-9727

27

COMBINATION BOX AND OPEN END

No. 1159-1176

25

ELECTRICAL

15° and 75° Angle

No. 1112-1132

25

ENGINEERS'

No. 1019-1041B

23

METRIC

Engineers' Dbl. Head

No. 1020 — 1041

83

Tapper Dbl. Head

No. 1090 — 1096

84

SETS, WRENCH

Box, 15°

No. 7706

17

Box, 45°

No. 8706

17

Combination Box and Open End

No. 1106-1109

16

Electrical

No. E9

25

Engineers'

No. 1006-1009

15

Socket, ⅜" Square Drive

No. CD-606 — C-625

30-32

Socket, ½" Square Drive

No. SD-810 — S-825

35-38

Socket, ¾" Square Drive

No. H-1212 — H-1217

42

Socket, ¾" and ½" Sq. Drive Combination

No. SH-32

40

Tappet

No. 46-48

24

SOCKET, DETACHABLE

⅜" 12 Pt. Double Hex

No. C-1212 — C-1224

28

⅜" 12 Pt. Extra Deep

No. CD-1214 — CD-1224

28

⅜" 12 Pt. Universal Flex

No. CU-1212 — CU-1224

28

⅜" Square Drive Parts

No. C-147 — SC-160

29

½" 12 Pt. Double Hex

No. S-1214 — S-1240

33

½" 12 Pt. Deep Wall

No. SD-1216 — SD-1236

33

½" 8 Pt. Double Square

No. S-814 — S-824

33

½" Square Drive Parts

No. S-1410 — S-1730

34

¾" 12 Pt. Double Hex

No. H-1234 — H-1264

41

¾" Square Drive Parts

No. H-1421 — SH-160

41

SPANNER, ADJUSTABLE HOOK

No. 1471-1476

49

TAPPET

No. 1090A-1096 Spec.

24

TEXTILE

Box Dbl. Hex Long 45°

No. DS-8

60

Box Dbl. Hex Short 45°

No. DS-7

60

Draper Loom

No. DS-4M

60

Loom

No. M-34

60

Short Heavy "S"

No. M-70 — M-71

60

Socket, T-Handle

No. DS-6M

59

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WRENCHES, CARBON STEEL

ADJUSTABLE

Coes

No. 91

63

Combination Pipe and Nut

No. 44

62

Model G

No. 9-15

62

Monkey

No. 90

63

BOX

Single Head Hex 15° Angle

No. 801A-812

53

Single Head Sq. 22½° Angle

No. 580-590

53

CAR

No. 367A-389B

61

CHAIN PIPE

Red Head Reversible

No. 20-87

70

Parts

No. 20-87

70

CHECK NUT

Double Head

No. 623D-640A

48

Single Head

No. 601A-610A

48

CONSTRUCTION

No. S-203A — S-212

54

ENGINEERS'

Double Head 15°

No. 721-49A

47

Single Head 15

No. S000-20A

46

METRIC

Check Nut Dbl. Head

No. 1350-M — 1364-M

81

Engineers' Dbl. Head

No. 1100A-M — 1157-M

82

SET SCREW

Dbl. Head 22½° Angle

No. 525-541

51

Single Head 22½° Angle

No. 500-511

51

SOCKET

Offset Handle Hex

No. 261A-278A

55

Offset Handle Square

No. 261J-276H

56

"T" Handle Hex

No. 961A-978A

57

"T" Handle Square

No. 961H-977P

58

SPANNER

Face

No. 418-442

50

Pin

No. 452-464

50

Model "L"

No. 1-3

49

STRUCTURAL

No. 901A-912

54

TEXTILE

Draper Loom

No. DS0-DS5

59

TOOL POST

No. 554-557

52

No. 562-568D

52

WHITWORTH

Check Nut

No. 1350W-1367W

81

Engineers'

No. 1101W-1159W

80

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TERMS

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WRENCH CHART

89



CARBON STEEL
WRENCHES

Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.
ENGINEERS' 15° ANGLE SINGLE HEAD				
S000	46	6		1½
S00	46	6		1
00	46	6		1
0	46	6		1½
1	46	6		2¼
2	46	6		3½
3	46	6		5¾
4	46	6		6½
5	46	6		9¼
6	46	6	1	
7	46	6	1	8
8	46	6	1	14
8A	46	6	1	13½
9	46	6	2	4
10	46	2	3	4
10A	46	2	3	3
11	46	2	3	13
11A	46	2	3	13
12	46	2	5	3
12A	46	2	5	
13	46	2	6	8
13A	46	2	6	13
14	46	1	8	12
14A	46	1	8	12
15	46	1	13	
15A	46	1	13	4
16	46	1	16	6
16A	46	1	15	6
16B	46	1	15	12
17	46	1	18	
17A	46	1	19	8
18	46	1	27	6
18A	46	1	27	13
19	46	1	34	13
19A	46	1	33	
19B	46	1	38	1
19C	46	1	36	2
20	46	1	47	6
20A	46	1	47	14
20B	46	1	47	14

ENGINEERS' 15° ANGLE DOUBLE HEAD

25	47	6		3½
27	47	6		6½
27B	47	6		6¾
28	47	6		10
29	47	6		9¾
29B	47	6		9¾
29C	47	6		8¾
31	47	6		15¼
31B	47	6		15
32B	47	6	1	2¼
33A	47	6	1	2¼
34	47	6	1	8
34A	47	6	1	7

Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.
ENGINEERS' 15° ANGLE DOUBLE HEAD				
36B	47	6	1	15
37	47	6	1	13
37A	47	6	1	12
39	47	2	2	8
39A	47	2	2	10
39B	47	2	3	
39C	47	2	2	14
41	47	2	3	15
41B	47	2	3	14
42A	47	2	5	12
43	47	2	5	10
44A	47	2	9	7
45	47	2	9	4
45A	47	2	8	9
47	47	2	12	4
47B	47	2	12	7
49	47	1	11	14
49A	47	1	12	

CONSTRUCTION 15° ANGLE SHORT TANG

S203	54	1		7¾
S203A	54	1		7¾
S204	54	1		7¾
S204A	54	1		7¾
S205	54	1	1	
S205A	54	1		15¾
S206	54	1	1	5
S206B	54	1	1	5
S207	54	1	1	7
S207A	54	1	1	7
S208	54	1	2	2
S208A	54	1	2	3
S209	54	1	3	1
S209A	54	1	2	14
S210	54	1	3	14
S210A	54	1	4	2
S211	54	1	7	3
S211A	54	1	6	12
S212	54	1	7	2

OFFSET HANDLE SOCKET

261A	55	6		1¼
261J	56	6		1¼
262D	55	6		2½
262H	56	6		2¾
263A	55	6		2¾
263D	55	6		2¾
263H	56	6		3¾
264A	55	6		3¼
265A	55	6		6
265D	55	6		5¾
265H	56	6		6¼
266D	55	6		8¼
266H	56	6		8¾
267A	55	6		9½
267D	55	6		9½
267H	56	6		9¾
268A	55	6	1	
268D	55	6	1	

Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.
OFFSET HANDLE SOCKET				
268H	56	6	1	½
268P	56	6	1	1
269A	55	6	1	¾
269H	56	6	1	7¼
270D	55	6	1	7
270S	55	6	1	6
271A	55	6	1	14
271D	55	6	1	13
271H	56	6	2	
273A	55	2	3	
273B	55	2	2	14
273H	56	2	2	15
274H	56	2	4	7
275A	55	2	4	6
275D	55	2	4	8
276A	55	2	6	13
276B	55	2	7	
276H	56	2	7	
277A	55	2	6	15
278A	55	1	8	11

CAR DOUBLE HEAD

367	61	1	1	5
367A	61	1	1	4
370	61	1	3	2
370A	61	1	3	2
370B	61	1	3	4
370C	61	1	3	
372A	61	1	4	4
373	61	1	4	1
376	61	1	4	9
376A	61	1	4	10
378A	61	1	6	
379	61	1	6	4
382	61	1	6	9
382A	61	1	6	10
383B	61	1	8	5
385	61	1	7	10
389	61	1	9	7
389B	61	1	9	12

FACE SPANNER

418	50	6		2¼
420	50	6		2½
422	50	6		3½
424	50	6		4½
426	50	6		6
428	50	6		7½
430	50	6		8
432	50	6		9¼
434	50	6		10½
436	50	6		11
438	50	6		12½
440	50	6		15½
442	50	6		15¾

CARBON STEEL WRENCHES

Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

PIN SPANNER

452	50	6		1 1/4
453	50	6		1 1/2
454	50	6		1 3/4
455	50	6		2 1/2
456	50	6		3
457	50	6		3 3/4
458	50	6		5
459	50	6		5 1/4
460	50	6		7
461	50	6		7 3/4
462	50	6		9 1/2
463	50	6		11
464	50	6		13

SET SCREW 22 1/2° ANGLE SINGLE HEAD

500	51	6		1 1/2
501	51	6		1 1/4
502	51	6		2
503	51	6		3 1/2
504	51	6		5 1/2
505	51	6		7
506	51	6		10 1/2
507	51	6		14 3/4
508	51	6	1	6
509	51	6	1	9
510	51	6	2	7
511	51	6	2	4

SET SCREW 22 1/2° ANGLE DOUBLE HEAD

525	51	6		1
527	51	6		3
529	51	6		4
531	51	6		6 1/2
533	51	6		9 1/4
535	51	6		13 3/4
537	51	6	1	4
539	51	6	1	14
541	51	6	2	7

TOOL POST DOUBLE HEAD

554	52	6		5
555	52	6		7 1/4
555B	52	6		7 1/4
555C	52	6		7
556	52	6		11 1/2

Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

TOOL POST DOUBLE HEAD

556B	52	6		11 3/4
556C	52	6		11 1/4
557	52	6		14 1/4
562	52	6		10 1/2
563	52	6		13 3/4
563B	52	6		14 1/4
563C	52	6		14
563D	52	6		13 1/2
564	52	6		13
565	52	6	1	2 1/4
566	52	6	1	7
566B	52	6	2	2
567	52	6	2	2
567B	52	6	2	2
567C	52	6	2	2
568	52	6	3	3
568B	52	6	3	3
568C	52	6	4	7
568D	52	6	4	9

BOX 22 1/2° ANGLE SINGLE HEAD SQUARE OPENING

580	53	6		3 3/4
581	53	6		3 3/4
582	53	6		2
583	53	6		2
584	53	6		2
585	53	6		4 1/4
586	53	6		4 1/4
587	53	6		7 3/4
588	53	6		13
589	53	6	1	3 1/2
590	53	6	1	8

CHECK NUT 15° ANGLE SINGLE HEAD

601	48	6		1 1/2
601A	48	6		1 1/2
602	48	6		2
602A	48	6		2
603	48	6		3
603A	48	6		3
604	48	6		3 3/4
604A	48	6		4
605	48	6		5 1/2
605A	48	6		5 1/4
606	48	6		7
606B	48	6		6 3/4
607	48	6		10 1/4
607A	48	6		9 1/2
608	48	6		15
608A	48	6		15 1/2
609	48	6	1	6
609A	48	6	1	4
610	48	6	2	6
610A	48	6	2	5

Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

CHECK NUT 15° ANGLE DOUBLE HEAD

623D	48	6		1 3/4
624A	48	6		1 3/4
624B	48	6		1 3/4
625	48	6		1 1/2
626S	48	6		2 3/4
627	48	6		2 3/4
629	48	6		5
629D	48	6		3
630B	48	6		4 3/4
630E	48	6		4 3/4
631	48	6		4 1/2
631A	48	6		4 1/2
632C	48	6		7 1/2
634A	48	6		7
634B	48	6		7 1/2
635D	48	6		13 3/4
637	48	6		13
637A	48	6		13
639	48	6	1	11
640A	48	6	1	9

ENGINEERS' 15° ANGLE SINGLE HEAD

700	46	6		1
701	46	6		2
702	46	6		3
703	46	6		5
704	46	6		7
705	46	6		10
706	46	6		15
707	46	6	1	7
709	46	6	2	6

ENGINEERS' 15° ANGLE DOUBLE HEAD

721	47	6		1
723	47	6		2
725	47	6		3
725A	47	6		3
725B	47	6		3
727	47	6		5
729	47	6		10
731	47	6		15
731A	47	6		14
731B	47	6		15
733	47	6	1	1
735	47	6	1	6

BOX 15° ANGLE SINGLE HEAD HEX OPENING

801	53	6		1 3/4
801A	53	6		1 3/4
802	53	6		2 1/2
802A	53	6		2 1/2
803	53	6		3 3/4



CARBON STEEL
WRENCHES

Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

BOX
15° ANGLE SINGLE HEAD
HEX OPENING

803A	53	6		3 1/4
804	53	6		4
804A	53	6		4 3/4
805	53	6		7
805A	53	6		7
806	53	6		9
806B	53	6		9 1/4
807	53	6		12
807A	53	6		11 3/4
808	53	6	1	1
808A	53	6	1	1
809	53	2	1	8
809A	53	2	1	7
810	53	2	2	5
810A	53	2	2	4
811	53	2	2	13
811A	53	2	2	11
812	53	2	4	

STRUCTURAL
LONG TANG OFFSET HEAD

901	54	1		4 1/4
901A	54	1		4 1/4
901B	54	1		4
902	54	1		4
903	54	1		9 1/2
903A	54	1		9 3/4
904	54	1		8 1/4
904A	54	1		9 1/2
905	54	1	1	2 1/4
905A	54	1	1	2 1/2
906	54	1	1	2
906B	54	1	1	1
907	54	1	1	13
907A	54	1	1	13
908	54	1	2	12
908A	54	1	2	12
909	54	1	4	6
909A	54	1	4	3
910	54	1	6	6
910A	54	1	6	1
911	54	1	8	1
911A	54	1	9	1
912	54	1	8	2

T HANDLE SOCKET
HEX AND SQUARE OPENINGS

961A	57	6		1 1/2
961H	58	6		1 3/4
961J	58	6		1 1/2
962D	57	6		3

Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

T HANDLE SOCKET
HEX AND SQUARE OPENINGS

962H	58	6		3 1/2
963A	57	6		3 1/2
963D	57	6		3
963H	58	6		5 1/4
964A	57	6		5
965A	57	6		7 1/4
965D	57	6		7
965H	58	6		7
966D	57	6		10 1/4
966H	58	6		12
967A	57	6		11 1/2
967D	57	6		11 3/4
967H	58	6		11
968A	57	6	1	2
968D	57	6	1	1
968H	58	6	1	1
968P	58	6	1	1
969A	57	6	1	2
969H	58	6	1	11
970D	57	2	1	12
970S	57	2	1	10 1/2
971A	57	2	2	5
971D	57	2	2	4
971H	58	2	2	4
973A	57	2	3	2
973B	57	2	3	3
973H	58	2	3	1
974H	58	2	4	5
975A	57	2	4	4
975D	57	2	4	6
976A	57	1	6	
976B	57	1	6	1
976H	58	1	4	5
977A	57	1	6	3
977P	58	1	7	7
977X	58	1	6	
978A	57	1	7	8

VITALLOY®
FORGED WRENCHESENGINEERS'
15° ANGLE DOUBLE HEAD

1019	23	6		1/4
1020	23	6		1 1/2
1025	23	6		1 1/2
1027	23	6		4
1027B	23	6		4
1028	23	6		5
1029	23	6		6 1/4
1029B	23	6		5
1029C	23	6		5
1031	23	6		8 1/4
1031B	23	6		9
1032B	23	6		11
1033A	23	6		11
1033C	23	6		14
1034	23	6		13 3/4
1034A	23	6		13
1036B	23	6	1	3

Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

ENGINEERS'
15° ANGLE DOUBLE HEAD

1037	23	6	1	4
1037A	23	6	2	
1039	23	6	2	6
1039A	23	6	2	14
1039B	23	6	2	9
1039C	23	6	2	8
1041	23	2	3	6
1041B	23	2	3	7

TAPPET CHECK NUT
15° ANGLE DOUBLE HEAD

1090	24	6		2 1/2
1090A	24	6		2 3/4
1090B	24	6		2 1/2
1090C	24	6		2 1/2
1090D	24	6		2 3/4
1090E	24	6		2 1/2
1092	24	6		4 1/4
1092B	24	6		4 1/4
1092D	24	6		4
1092F	24	6		4
1094	24	6		5 1/2
1094A	24	6		5 1/4
1094B	24	6		5 3/4
1094D	24	6		5 3/4
1094F	24	6		5 1/4
1094G	24	6		5 1/4
1096	24	6		6 3/4
1096A	24	6		7 1/4
1096F	24	6		6 3/4
1096H	24	6		6 3/4
1096 Spec.	24	6		6 1/2

ELECTRICAL
15° AND 75° ANGLE

1112	25	12		1/4
1113	25	12		1/4
1114	25	12		1/4
1115	25	12		1/4
1116	25	12		1/4
1118	25	12		1 1/2
1120	25	12		1 1/2
1122	25	12		1 1/2
1124	25	12		1 1/2
1128	25	12		1
1132	25	12		1 1/4

COMBINATION
BOX AND OPEN HEAD

1159	25	6		3/4
1159A	25	6		3/4
1160	25	6		1
1161	25	6		1 1/2
1162	25	6		2 1/4
1163	25	6		3 1/4
1163A	25	6		2 1/2

VITALLOY® FORGED WRENCHES

Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

COMBINATION BOX AND OPEN END

1164	25	6		3 1/2
1165	25	6		5
1166	25	6		6 1/2
1166A	25	6		6 1/2
1167	25	6		9 1/4
1167A	25	6		9 1/2
1168	25	6		14 3/4
1170	25	6	1	1
1171	25	6	1	8
1172	25	2	1	8
1173	25	2	2	2
1174	25	2	2	2
1176	25	2	3	8

HOOK SPANNER ADJUSTABLE

1471	49	6		4
1472	49	6		7 1/2
1474	49	6		13 3/4
1476	49	2	2	4

ENGINEERS' 15° ANGLE DOUBLE HEAD

1720	23	6		3 3/4
1721	23	6		3 3/4
1723	23	6		1 1/4
1725	23	6		1 3/4
1725A	23	6		1 1/2
1725B	23	6		2 1/2
1727	23	6		3 1/4
1729	23	6		4 1/2
1731	23	6		6 1/4
1731A	23	6		7 3/4
1731B	23	6		7 1/2
1733	23	6	11	
1735	23	6	1	3 1/2

BOX 15° ANGLE SHORT DOUBLE HEX

6025	26	6		2
6723	26	6		1
6725	26	6		1
6725A	26	6		2
6725B	26	6		2 1/4
6727	26	6		2 1/2

Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

BOX 15° ANGLE LONG DOUBLE HEX

7025	26	6		3 1/2
7027	26	6		7
7029	26	6		8 3/4
7029B	26	6		9
7031	26	6		11 3/4
7031B	26	6		13 1/4
7033A	26	6		13 1/4
7033C	26	6	1	
7034A	26	6	1	12
7037	26	2	2	8
7037A	26	2	2	8
7039	26	2	2	12
7039A	26	2	3	
7039B	26	2	2	14
7040B	26	2	3	2
7041	26	2	4	
7723	26	6		2
7725	26	6		2 1/2
7725A	26	6		3 1/2
7725B	26	6		3 1/2
7727	26	6		4 1/2
7727A	26	6		7 1/4
7729	26	6		6 3/4
7729A	26	6		10 1/2
7731A	26	6		10 1/2
7731B	26	6		12
7733	26	6		14
7735	26	2	2	
7735A	26	2	1	7
7742B	26	2	4	

BOX 45° ANGLE LONG DOUBLE HEX

8025	27	6		3 1/4
8027	27	6		6
8029	27	6		6 1/2
8029B	27	6		6 1/2
8031	27	6		11 3/4
8031B	27	6		11
8033A	27	6	1	
8033C	27	6	1	1 1/2
8034A	27	6	1	2
8037	27	2	2	
8037A	27	2	3	5
8039	27	2	3	5
8039A	27	2	3	5
8039B	27	2	3	5
8040B	27	2	6	4
8041	27	2	5	2
8045	27	2	8	8
8049	27	2	10	4
8053	27	2	14	8
8723	27	6		2
8725	27	6		2
8725A	27	6		2 3/4
8725B	27	6		3 3/4
8727	27	6		5
8727A	27	6		6
8729	27	6		5 3/4
8729A	27	6		7 1/2
8731A	27	6		9 1/4

Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

BOX 45° ANGLE LONG DOUBLE HEX

8731B	27	6		12
8733	27	6		14 3/4
8735	27	2	2	5
8735A	27	2	2	5
8742B	27	2	5	12

BOX 45° ANGLE SHORT DOUBLE HEAD

9025	27	6		3
9723	27	6		1 3/4
9725	27	6		2 1/4
9725A	27	6		3
9725B	27	6		3
9727	27	6		4 1/4

CARBON STEEL WRENCHES

SPANNER ADJUSTABLE MODEL L

0	49	6		3 1/4
1	49	6		7 3/4
2	49	6		9
3	49	6	1	4

ADJUSTABLE MODEL "G"

9"	62	1		14 1/2
11"	62	1	1	9
15"	62	1	3	1

TEXTILE DRAPER LOOM

DS-0	59	6		2
DS-2	59	6		3 1/4
DS-3	59	6		8 1/4
DS-4M	60	6		7 1/2
DS-5	59	2		7
DS-6M	59	1	3	
DS-7	60	2		4 3/4
DS-8	60	2		10 3/4
M-34	60	6		8 1/4
M-70	60	6		2 1/4
M-71	60	6		3 1/4



**CARBON STEEL
WRENCHES**

Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

**CHAIN PIPE
"RED HEAD" REVERSIBLE**

20	70	1	6	10
27	70	1	10	11
37	70	1	17	13
47	70	1	26	
57	70	1	38	
67	70	1	62	
87	70	1	130	

**PIPE AND NUT
COMBINATION**

44-15"	62	6	5	
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**MONKEY
STEEL HANDLE**

90-10"	63	6	1	12
90-12"	63	6	2	14
90-15"	63	6	4	4
90-18"	63	2	5	15
90-21"	63	1	7	12

**GENUINE "COES"
STEEL HANDLE**

91-10"	63	6	2	8
91-12"	63	6	3	15
91-15"	63	6	5	6
91-18"	63	2	7	2
91-21"	63	2	10	2

**VITALLOY®
FORGED WRENCHES****Sets****ELECTRICAL
LEATHERETTE ROLL**

E-9	25	1		5
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**TAPPET CHECK NUT
PASTEBOARD BOX**

46	24	1		15
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Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

**TAPPET CHECK NUT
LEATHERETTE ROLL**

46	24	1		15
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**TAPPET CHECK NUT
PASTEBOARD BOX**

47	24	1	1	11
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**TAPPET CHECK NUT
LEATHERETTE ROLL**

47	24	1	1	10
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**TAPPET CHECK NUT
PASTEBOARD BOX**

48	24	1	1	15
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**TAPPET CHECK NUT
LEATHERETTE ROLL**

48	24	1	2	
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**ENGINEERS'
LEATHERETTE ROLL**

1006	15	1	2	4
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**ENGINEERS'
LEATHERETTE ROLL**

1009	15	1	2	9
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**COMBINATION
LEATHERETTE ROLL**

1106	16	1	1	12
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**COMBINATION
LEATHERETTE ROLL**

1109	16	1	3	12
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**BOX
15° ANGLE LEATHERETTE ROLL**

7706	17	1	2	2
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**BOX
45° ANGLE LEATHERETTE ROLL**

8706	17	1	2	
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**VITALLOY® FORGED
WRENCH BOARD
ASSORTMENTS**

No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

**COMBINATION
BOX AND OPEN HEAD**

C-37	19	1	17	2
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**BOX
45° ANGLE DOUBLE HEAD**

B-40	20	1	17	13
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**BOX
15° ANGLE DOUBLE HEAD**

B-42	20	1	18	13
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**ENGINEERS'
15° ANGLE DOUBLE HEAD**

E-52	19	1	17	9
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**SOCKETS AND PARTS
"HEAVY DUTY" SERIES ¾" SQ. DR.**

H-24	22	1	34	13
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**SOCKETS AND PARTS
"CADET" SERIES ¾" SQ. DR.**

C-48	21	1	13	14
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**SOCKETS AND PARTS
"STANDARD" SERIES ½" SQ. DR.**

S-75	21	1	28	1
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**VITALLOY® FORGED
SOCKETS AND
UNIT PARTS****¾" SQUARE DRIVE**

CB-110	29	10		1½
C-118	29	5		7
C-128	29	5		4¾
C-133	29	5		1¾
C-135	29	5		2½

VITALLOY® FORGED SOCKETS AND UNIT PARTS

No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

3/8" SQUARE DRIVE

C-138	29	5		4 1/4
C-147	29	1		9 1/2
CP-150	29	5		1 1/2
C-157	29	1		7 3/4
CS-160	29	5		2 1/4
C-180	29	5		1 1/2
C-1017	29	2	15 3/4	
C-1212	28	10		8 3/4
C-1214	28	10		8 3/4
C-1216	28	10		8 3/4
C-1218	28	10		1
C-1220	28	10		1
C-1222	28	10		1 1/2
C-1224	28	10		1 1/2
CD-1214	28	5		1 3/4
CD-1216	28	5		2 1/4
CD-1218	28	5		2 1/4
CD-1220	28	5		2 1/2
CD-1222	28	5		3 1/4
CD-1224	28	5		3 1/2
CU-1212	28	5		1
CU-1214	28	5		1 1/4
CU-1216	28	5		1 1/2
CU-1218	28	5		1 1/4
CU-1220	28	5		1 1/2
CU-1222	28	5		1 3/4
CU-1224	28	5		1 3/4
C-1312	29	5		5 3/4

1/2" SQUARE DRIVE

SB-110	34	10		5 1/4
S-135	34	5		4 3/4
SP-150	34	5		1 1/4
S-158	34	1	15 1/4	
SC-160	34	5		1
S-180	34	5		3 1/2
S-814	33	10		1 1/2
S-816	33	10		2
S-818	33	10		2
S-820	33	10		2 3/4
S-824	33	10		3 1/4
S-1018	34	2	1	5
S-1112	34	5	1	1
S-1118	34	5	1	10
S-1211	34	5		14 1/2
S-1214	33	10		1 1/4
S-1216	33	10		1 1/2
S-1218	33	10		1 1/2
S-1219	33	10		1 3/4
S-1220	33	10		1 1/2
S-1222	33	10		2 1/4
S-1224	33	10		2 1/4
S-1225	33	10		2 1/4
S-1226	33	10		2 1/2
S-1228	33	10		2 1/2

No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

1/2" SQUARE DRIVE

S-1230	33	10		3 1/4
S-1232	33	10		4 1/4
S-1234	33	5		5 1/4
S-1236	33	5		5 1/4
S-1240	33	5		6 3/4
SD-1216	33	5		4 1/2
SD-1218	33	5		4
SD-1220	33	5		3 3/4
SD-1222	33	5		4 1/4
SD-1224	33	5		5 1/2
SD-1226	33	5		5 3/4
SD-1228	33	5		7
SD-1230	33	5		7 3/4
SD-1232	33	5		7 3/4
SD-1236	33	5		9 1/2
S-1310	34	5		9
S-1318	34	5		14 3/4
S-1410	34	1	1	3
S-1724	34	5		2
S-1730	34	5		2 1/2

3/4" SQUARE DRIVE

HB-110	41	2		13 1/2
H-138	41	2	1	
SH-160	41	5		4
H-1121	41	2	3	2 1/2
H-1220	41	2	2	10
H-1234	41	5		5 1/2
H-1236	41	5		6
H-1238	41	5		6 1/2
H-1240	41	5		8 1/4
H-1242	41	5		7 3/4
H-1244	41	5		10 1/4
H-1246	41	5		10 1/2
H-1248	41	2		10 1/2
H-1250	41	2		15
H-1252	41	2		15
H-1254	41	2	1	
H-1256	41	2	1	1 1/2
H-1258	41	2	1	2 3/4
H-1260	41	2	1	6
H-1264	41	2	1	8
H-1316	41	2	2	
H-1421	41	1	4	8

VITALLOY® FORGED SOCKET SETS

SH-32	40	1	49	
Metal Box				
CD-606	40	1	1	1
Pasteboard Box				
CU-607	40	1		12
Pasteboard Box				
C-608	31	1	1	3/4
Pasteboard Box				
C-608	31	1	1	15 1/2
Metal Box				
C-610	31	1	1	13
Pasteboard Box				
C-610	31	1	2	11 1/2
Metal Box				

No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

VITALLOY® FORGED SOCKET SETS

C-615	32	1	7	4
Metal Box				
C-625	32	1	8	10
Metal Box				
SD-810	35	1	4	5
Pasteboard Box				
S-811	35	1	4	14
Metal Box				
S-811A	35	1	2	14
Pasteboard Box				
S-811A	35	1	4	8
Metal Box				
S-811B	36	1	3	15
Metal Box				
S-812	36	1	1	13
Pasteboard Box				
S-813	37	1	4	6
Pasteboard Box				
S-813	37	1	5	14
Metal Box				
S-816	37	1	6	7
Metal Box				
S-824	38	1		15
Metal Box				
S-825	38	1	13	11
Metal Box				
H-1212	42	1		17
Metal Box				
H-1217	42	1		33
Metal Box				

CARBON STEEL SHOP TOOLS

"C" CLAMPS MODEL AZ — HEAVY SERVICE

0	64	1		4
1	64	1		8
1 1/2	64	1	1	8
2	64	1	3	4
3	64	1	6	12
4	64	1	9	5
5	64	1	12	13
6	64	1	18	
8	64	1	26	2
10	64	1	31	3
12	64	1	41	13

MODEL GS — GENERAL SERVICE

104	64	1	4	8
106	64	1	5	12
108	64	1	7	
110	64	1	8	9
112	64	1	11	15
115	64	1	15	6
118	64	1	19	12



CARBON STEEL SHOP TOOLS

No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

"Clamps"

MODEL AX — MACHINISTS

301	66	1		8
302	66	1	1	2
303	66	1	1	12
304	66	1	2	13

MODEL BB — BODY BUILDERS

402	65	1	1	2
403	65	1	1	11
404	65	1	2	6
406	65	1	3	11
408	65	1	5	13
410	65	1	8	3
412	65	1	12	1

MODEL SR — SPATTER RESISTING

402-S	65	1	1	2
403-S	65	1	1	11
404-S	65	1	2	6
406-S	65	1	3	11
408-S	65	1	5	13
410-S	65	1	8	3
412-S	65	1	12	1

STRAP CLAMP UNIVERSAL ADJUSTABLE

1	66	1	1	2 1/4
2	66	1	2	12
3	66	1	9	1

MODEL AU CLAMP DOG PARALLEL

1	67	1		8
2	67	1		12
3	67	1	1	8
4	67	1	3	9

MODEL AR LATHE DOG

1	67	1		3
2	67	1		5
3	67	1		9
4	67	1		15
5	67	1	1	9
6	67	1	1	15
7	67	1	2	13
8	67	1	3	6
9	67	1	5	6
10	67	1	7	
11	67	1	10	1
12	67	1	11	6
13	67	1	17	4

MODEL CK — LATHE DOG

1	67	1		4
2	67	1		5
3	67	1		8
4	67	1		15
5	67	1	1	10
6	67	1	2	
7	67	1	2	14
8	67	1	3	6
9	67	1	5	5
10	67	1	6	13
11	67	1	10	14
12	67	1	11	6
13	67	1	18	3

CARBON STEEL INDUSTRIAL PRODUCTS

EYE BOLTS PLAIN PATTERN BLANKS AND THREADED

40	74	1		1 1/2
41	74	1		1
42	74	1		3
43	74	1		4 1/2
44	74	1		5
45	74	1		6
46	74	1		13
47	74	1	1	5
48	74	1	1	11
49	74	1	2	
49 1/2	74	1	3	5

EYE BOLTS PLAIN PATTERN BLANKS AND THREADED

50	74	1	4	10
51	74	1	7	
52	74	1	10	2
53	74	1	15	6

EYE BOLTS SHOULDER PATTERN BLANKS AND THREADED

58	74	1		1 1/2
59	74	1		1
60	74	1		2
60A	74	1		3
61	74	1		8
61A	74	1		7
62	74	1		12 1/2
63	74	1	1	4
64	74	1	1	12
65	74	1	2	7
66	74	1	3	10
67	74	1	4	11
68	74	1	7	11

EYE BOLTS CABLE BLANKS AND THREADED

70	74	1		6
71	74	1		8
72	74	1	1	1

EYE NUTS BLANKS AND TAPPED

100	76	1		2
101	76	1		6
102	76	1		14
103	76	1		8
104	76	1	1	1
105	76	1	3	7
106	76	1	6	4
107	76	1	9	6

VITALLOY® FORGED SHOP TOOLS

No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

HAMMERS — BALL PEIN MODEL AD AND BC

5/0	43	6		6½
3/0	43	6		11¼
2/0	43	6	1	
0	43	6	1	4
1	43	6	1	6
2	43	6	1	13
4	43	2	2	6
6	43	2	2	15

CARBON STEEL INDUSTRIAL PRODUCTS

HOIST HOOKS

22	79	1		8
23	79	1		11
24	79	1		15½
25	79	1	1	10
26	79	1	2	2
27	79	1	2	15
28	79	1	4	9
29	79	1	5	11
30	79	1	8	8
31	79	1	10	2
32	79	1	13	13
33	79	1	18	6

ROD ENDS

BLANKS AND MILLED AND DRILLED

0	72	1		1
1	72	1		2
2	72	1		3
3	72	1		4
4	72	1		6
5	72	1		8
6	72	1		13
7	72	1	1	5

No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

BLANKS AND MILLED AND DRILLED

8	72	1	1	14
9	72	1	2	11
71	72	1		½
72	72	1		1
73	72	1		1¼
74	72	1		2
75	72	1		3¼
76	72	1		6

CARBON STEEL SHOP TOOLS

SCREW DRIVERS — MODEL P

20½	68	6		8½
21	68	6		10½
22	68	6		14¼

SCREW DRIVERS — MODEL Z OFFSET

	68	12		1¾
--	----	----	--	----

CARBON STEEL INDUSTRIAL PRODUCTS

THUMB NUTS BLANKS AND TAPPED

			Per 100	
			Lbs.	Ozs.
00	75	1		17½
0	75	1	2	5
0½	75	1	3	5
1	75	1	4	6
2	75	1	6	5
3	75	1	11	6
4	75	1	14	5
5	75	1	21	6
6	75	1	29	3
7	75	1	39	8

No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

THUMB SCREWS BLANKS AND THREADED

			Per 100	
			Lbs.	Ozs.
308	77	1	1	10¼
312	77	1	2	
316	77	1	2	½
320	77	1	2	3
324	77	1	2	15½
328	77	1	2	15
332	77	1	3	
408	77	1	2	6½
412	77	1	3	2½
416	77	1	3	3½
420	77	1	4	
424	77	1	4	3
428	77	1	4	5
432	77	1	5	3
436	77	1	6	¼
440	77	1	6	2¼
444	77	1	6	4
448	77	1	6	7
508	77	1	4	5
512	77	1	4	6½
516	77	1	5	7¾
520	77	1	6	5
524	77	1	8	1¼
528	77	1	7	½
532	77	1	7	7½
536	77	1	8	
540	77	1	10	4½
544	77	1	10	8
548	77	1	11	7
556	77	1	12	8
564	77	1	14	3¾
608	77	1	7	7¼
612	77	1	7	6½
616	77	1	7	6¾
620	77	1	9	6½
624	77	1	10	
628	77	1	10	10
632	77	1	12	8
636	77	1	13	
640	77	1	13	4¼
644	77	1	13	12
648	77	1	14	2¼
656	77	1	16	
664	77	1	17	3½
708	77	1	10	
712	77	1	10	¼
716	77	1	10	3
720	77	1	10	7
724	77	1	11	1½
728	77	1	13	7½
732	77	1	14	7
736	77	1	15	
740	77	1	16	4¼
744	77	1	19	10
748	77	1	21	3½
756	77	1	22	
764	77	1	23	7½
808	77	1	15	9
812	77	1	15	¾
816	77	1	16	1
820	77	1	16	
824	77	1	17	
828	77	1	19	3
832	77	1	22	8¼
836	77	1	23	9



CARBON STEEL INDUSTRIAL PRODUCTS

No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

THUMB SCREWS BLANKS AND THREADED

			Per 100	
			Lbs.	Ozs.
840	77	1	25	5 $\frac{3}{4}$
844	77	1	25	6
848	77	1	25	7
856	77	1	26	9 $\frac{1}{2}$
864	77	1	27	11

CARBON STEEL SHOP TOOLS

No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

VICES — CHAIN PIPE

1	71	1	4	1
2	71	1	11	8
3	71	1	20	6
4	71	1	30	4

CARBON STEEL INDUSTRIAL PRODUCTS

No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

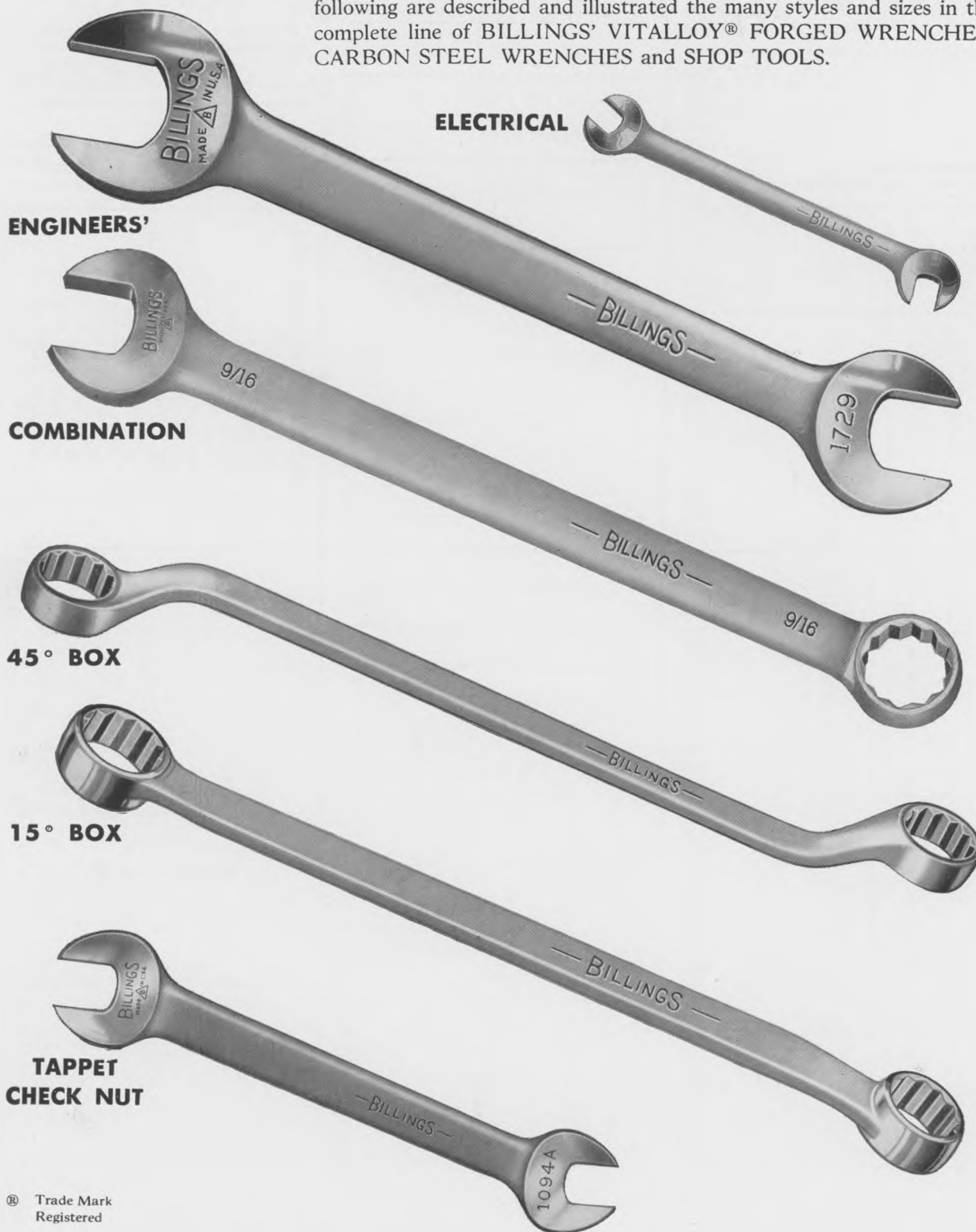
YOKE ENDS BLANKS — MILLED AND DRILLED — TAPPED, MILLED AND DRILLED

50	73	1		$\frac{1}{2}$
51	73	1		1
52	73	1		2
53	73	1		3
54	73	1		6
55	73	1		7
55 $\frac{1}{2}$	73	1		9
56	73	1	1	2
60	73	1		1
61	73	1		1
62	73	1		1 $\frac{1}{2}$
63	73	1		2
64	73	1		3
65	73	1		5
66	73	1		9
67	73	1		14

BILLINGS

VITALLOY® FORGED WRENCHES

"BILLINGS' VITALLOY"® — the results of the combined skills and knowledge, physical and metallurgical, experienced by the men of Billings and gathered since 1869 — nearly a century of progress in the engineering, designing and producing of fine tools. This page shows a few of the popular Billings' Vitalloy® Forged Wrenches. On the pages following are described and illustrated the many styles and sizes in the complete line of BILLINGS' VITALLOY® FORGED WRENCHES, CARBON STEEL WRENCHES and SHOP TOOLS.



® Trade Mark
Registered



15° ANGLE ENGINEERS' WRENCH SETS NO. 1006

CONTENTS:

FINISH — HEAVY CHROME PLATE OVER COPPER
AND NICKEL, HEADS POLISHED

Vitalloy Forged Wrench No.	Nominal Openings	Amer. Std. Hex Head Cap Screws Dia. Screws	Amer. Std. Light Nut (SAE) Size Bolts
1020	1/4 & 5/16	— & —	†4 & †5, †6
1723	3/8 & 7/16	— & 1/4	†10 & †12, 1/4
1725B	1/2 & 9/16	5/16 & 3/8	5/16 & 3/8
1729	5/8 & 3/4	7/16 & 1/2	7/16 & 1/2
1731A	3/4 & 7/8	1/2 & 5/8	1/2 & 9/16
1033C	15/16 & 1	— & 3/4	5/8 & —

† American Standard Machine Screw and Stove Bolt Nuts.



SET NO. 1006

The aristocrat of the wrench industry furnished in a practical leatherette roll, a space for each wrench, eyelets for hanging on wall of work shop or tool crib and a cord for tying. BILLINGS' VITALLOY® FORGED 15° Angle ENGINEERS', drop forged from special analysis alloy steel, heat treated. Each wrench has two different size openings, in a range of openings from 1/4" to 1". See Page 23 for additional sizes.

15° ANGLE ENGINEERS' WRENCH SETS NO. 1009

CONTENTS:

FINISH — HEAVY CHROME PLATE OVER COPPER
AND NICKEL, HEADS POLISHED

Vitalloy Forged Wrench No.	Nominal Openings	Amer. Std. Hex Head Cap Screws Dia. Screws	Amer. Std. Light Nut (SAE) Size Bolts
1020	1/4 & 5/16	— & —	†4 & †5, †6
1721	5/16 & 3/8	— & —	†5, †6 & †10
1723	3/8 & 7/16	— & 1/4	†10 & †12, 1/4
1725	7/16 & 1/2	1/4 & 5/16	†12, 1/4 & 5/16
1725B	1/2 & 9/16	5/16 & 3/8	5/16 & 3/8
1727	9/16 & 5/8	3/8 & 7/16	3/8 & 7/16
1729	5/8 & 3/4	7/16 & 1/2	7/16 & 1/2
1731A	3/4 & 7/8	1/2 & 5/8	1/2 & 9/16
1033C	15/16 & 1	— & 3/4	5/8 & —

† American Standard Machine Screw and Stove Bolt Nuts.



SET NO. 1009

Nine BILLINGS' VITALLOY® FORGED 15° Angle ENGINEERS' Wrenches complete in a leatherette roll. This assortment is practical for home use or for industrial service and maintenance work. Openings range from 1/4" to 1", with two sizes to each wrench. The roll is a handy method of carrying the wrenches as each wrench has a separate compartment yet may be quickly removed. See Page 23 for additional sizes.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

**SET NO. 1106**

Six BILLINGS' VITALLOY® FORGED Wrenches in the popular Combination style — Box and Open Head. The sturdy leatherette roll has a cord for tying and eyelets for hanging on wall. The openings, same each end of wrench, range from 7/16" to 7/8". The heads of the Box end are thin, the teeth clearly cut, the chamfer on the opening helps in locating over nuts, etc. The Open Heads are uniformly accurate to size, clean with tapered jaws for cramp quarters. Drop forged from special analysis alloy steel, heat treated. An ideal, convenient assortment for home, farm and industry. For additional sizes see Page 25.

**COMBINATION
BOX AND OPEN HEAD
WRENCH SETS**

NO. 1106**CONTENTS:**

**FINISH — HEAVY CHROME PLATE OVER COPPER
AND NICKEL, HEADS POLISHED**

Vitalloy Forged Wrench No.	Nominal Openings	Amer. Std. Hex Head Cap Screws Dia. Screws	Amer. Std. Light Nut (SAE) Size Bolts
1161	7/16	1/4	1/4, †12
1162	1/2	5/16	5/16
1163	9/16	3/8	3/8
1164	5/8	7/16	7/16
1166	3/4	1/2	1/2
1167	7/8	5/8	9/16

† American Standard Machine Screw and Stove Bolt Nuts.
(Same Opening Each End)

**SET NO. 1109**

A convenient method — in a leatherette roll with tying cord and eyelets for hanging on the wall of work shop or tool crib. Nine BILLINGS' VITALLOY® FORGED Combination Wrenches in openings from 7/16" to 1" — same opening each end. Drop forged from special analysis alloy steel, heat treated. These popular and very practical wrenches are designed to give ample leverage in all sizes, good balance or "feel" to the handle and being VITALLOY® FORGED they are lighter and stronger. For additional sizes see Page 25.

**COMBINATION
BOX AND OPEN HEAD
WRENCH SET**

NO. 1109**CONTENTS:**

**FINISH — HEAVY CHROME PLATE OVER COPPER
AND NICKEL, HEADS POLISHED**

Vitalloy Forged Wrench No.	Nominal Openings	Amer. Std. Hex Head Cap Screws Dia. Screws	Amer. Std. Light Nut (SAE) Size Bolts
1161	7/16	1/4	1/4, †12
1162	1/2	5/16	5/16
1163	9/16	3/8	3/8
1164	5/8	7/16	7/16
1165	11/16	—	—
1166	3/4	1/2	1/2
1167A	13/16	9/16	—
1167	7/8	5/8	9/16
1170	1	3/4	—

† American Standard Machine Screw and Stove Bolt Nuts.
(Same Opening Each End)

BILLINGS VITALLOY® FORGED WRENCHES

15° ANGLE BOX WRENCH SET

45° ANGLE BOX WRENCH SET

NO. 7706 SET

VITALLOY® FORGED BOX WRENCHES

15° ANGLE—LONG PATTERN

Six popular size openings, from 3/8" to 7/8" BILLINGS' VITALLOY® FORGED 15° Angle Box Wrenches in a sturdy leatherette roll with tying cord and eyelets for hanging on wall. Drop forged from special analysis alloy steel, heat treated in scientifically controlled furnaces. Heads are thin, teeth clearly cut, handles smooth and rounded for comfortable grip. Engineered to give proper leverage and efficient working length in the various sizes. Opening sizes, two to each wrench, stamped on the handles for quick identification. Top and bottom of sockets chamfered to assist in locating wrench opening over nut, bolt or screw.

See Page 26 for further information and other styles of Box Wrenches.

CONTENTS:

FINISH—HEAVY CHROME PLATE
OVER COPPER AND NICKEL, HEADS POLISHED

Vitalloy Forged Wrench No.	Nominal Openings	Amer. Std. Hex Head Cap Screws Dia. Screws	Amer. Std. Light Nut (SAE) Size Bolts
7723	3/8 & 7/16	— & 1/4	†10 & 1/4, †12
7725	7/16 & 1/2	1/4 & 5/16	1/4, †12 & 5/16
7725B	1/2 & 9/16	5/16 & 3/8	5/16 & 3/8
7727	9/16 & 5/8	3/8 & 7/16	3/8 & 7/16
7729	5/8 & 3/4	7/16 & 1/2	7/16 & 1/2
7731A	3/4 & 7/8	1/2 & 5/8	1/2 & 9/16

† American Standard Machine Screw and Stove Bolt Nuts.



SET NO. 7706

NO. 8706 SET

VITALLOY® FORGED BOX WRENCHES

45° ANGLE—OFFSET—LONG PATTERN

BILLINGS' VITALLOY® FORGED 45° Angle Box Wrenches in handy leatherette rolls with eyelets for hanging on wall over work bench. Drop forged from special analysis alloy steel, heat treated and carefully inspected before packaging to maintain the Billings' standard of quality. Heads with the 45° Offset have the correct pitch to allow for clearance and working swing. Socket teeth are clean, accurately shaped and have a chamfered top and bottom for ready location over nuts, bolts, etc. Side walls are thin, advantageous in reaching sunken fastenings. Handles engineered to provide adequate leverage in all lengths. Each end a different size opening which is clearly stamped on the handle.

See Page 27 for additional sizes and styles.

CONTENTS:

FINISH—HEAVY CHROME PLATE
OVER COPPER AND NICKEL, HEADS POLISHED

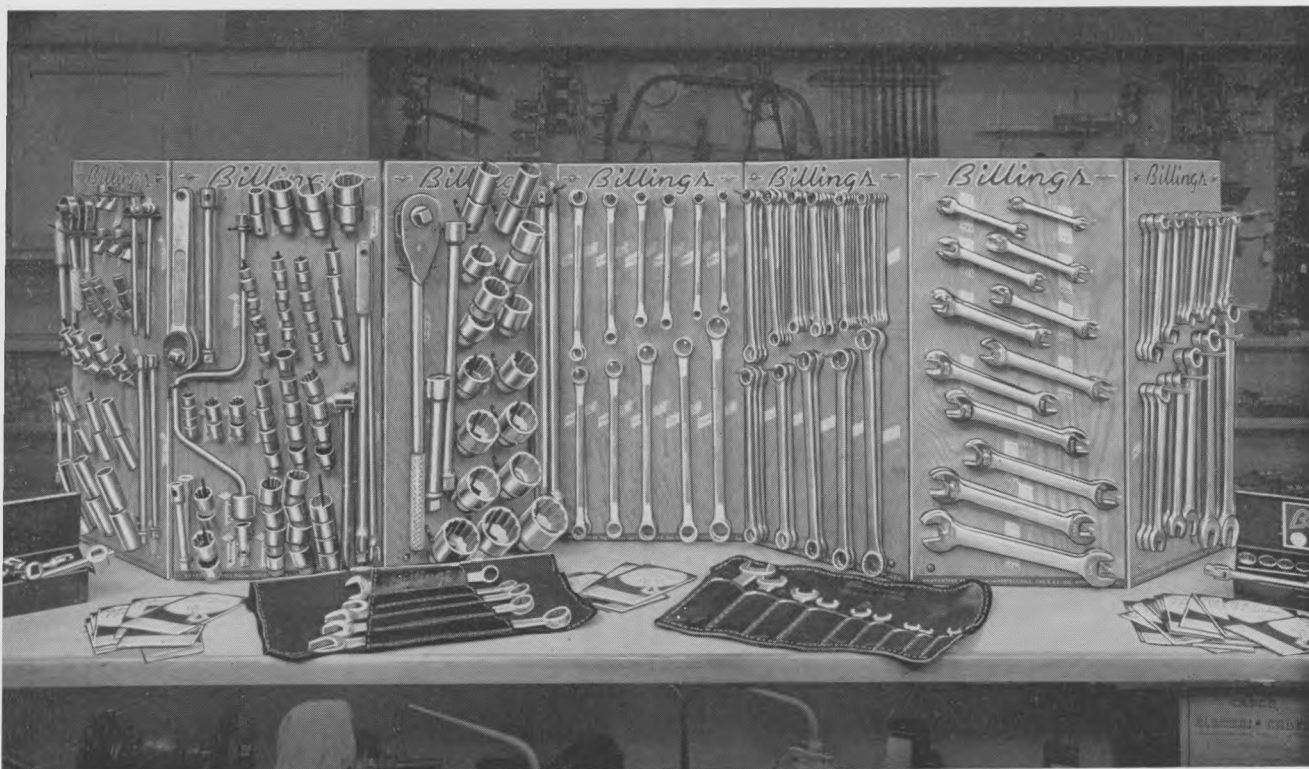
Vitalloy Forged Wrench No.	Nominal Openings	Amer. Std. Hex Head Cap Screws Dia. Screws	Amer. Std. Light Nut (SAE) Size Bolts
8723	3/8 & 7/16	— & 1/4	†10 & 1/4, †12
8725	7/16 & 1/2	1/4 & 5/16	1/4, †12 & 5/16
8725B	1/2 & 9/16	5/16 & 3/8	5/16 & 3/8
8727	9/16 & 5/8	3/8 & 7/16	3/8 & 7/16
8729	5/8 & 3/4	7/16 & 1/2	7/16 & 1/2
8731A	3/4 & 7/8	1/2 & 5/8	1/2 & 9/16

† American Standard Machine Screw and Stove Bolt Nuts.



SET NO. 8706

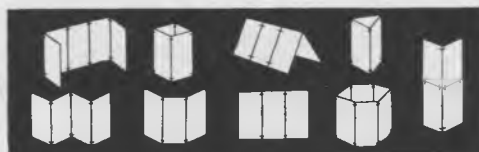
For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

WRENCH DISPLAY BOARD COMBINATIONS**BILLINGS' VITALLOY® FORGED WRENCHES AND SOCKETS**

Seven Display boards — 115 basic wrenches scientifically selected from more than 1200 wrench items. They make a complete wrench service for the farm trade, householders, hobbyists, garage and industrial mechanics.

See the following pages for detail regarding these seven attractive displays of BILLINGS' VITALLOY® FORGED ENGINEERS', 15° and 45° BOX, COMBINATION and 3/8", 1/2" and 3/4" Square Drive SOCKETS and PARTS.

Each board 1 x 2 ft. of natural finish plywood. Each size of wrench is securely held on the board by strong hooks bolted from the back of the board, yet each size wrench may be easily removed for inspection.

A Few Display Arrangements

Individual boards may be selected and combined in different arrangements to meet various requirements.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

® Registered Trade Mark

BILLINGS VITALLOY® FORGED WRENCHES COMBINATION BOX AND OPEN HEAD 15° ANGLE DOUBLE HEAD ENGINEERS'

wrench boards **DISPLAYS**

NO. C-37

COMBINATION WRENCH DISPLAY NO. C-37

BILLINGS' VITALLOY® FORGED COMBINATION WRENCHES attractively displayed on natural finish plywood boards, 1 x 2 ft. Drop forged from special analysis alloy steel, scientifically heat treated for strength and wearing qualities. Openings are uniformly shaped, accurate and with thin walls on the Box Head. Top and bottom of Box Head is chamfered for easier location over nuts, bolts, etc. Same size opening each end is clearly stamped on handle. These are correctly designed and engineered wrenches with proper balance and "feel" for practical applications. The sizes shown will fit 119 different sizes of nuts, bolts or screws. Shipped complete in carton.

See Page 25 for additional data and sizes.

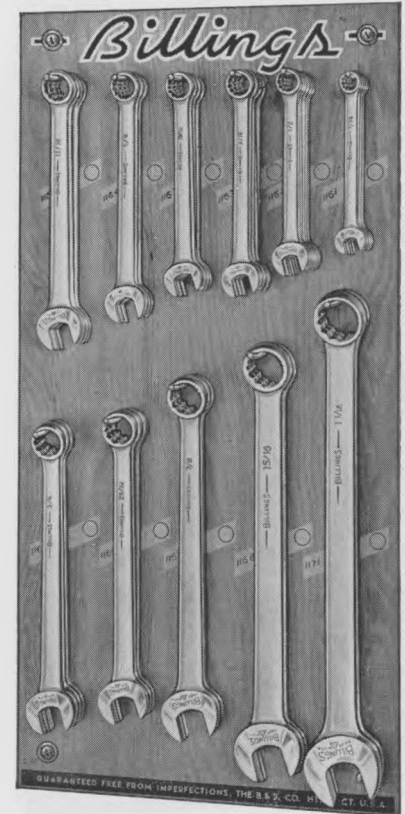
CONTENTS:

FINISH — HEAVY CHROME PLATE OVER COPPER AND NICKEL, HEADS POLISHED

Quantity	Vitalloy Forged Wrench No.	Nominal Openings	Quantity	Vitalloy Forged Wrench No.	Nominal Openings
4	1161	7/16	3	1166	3/4
6	1162	1/2	3	1166A	25/32
5	1163	9/16	2	1167	7/8
4	1163A	19/32	2	1168	15/16
3	1164	5/8	2	1171	1 1/16
3	1165	1 1/16			

C-37 Wrench Board Display, complete with board.
(No charge for board when assortment is purchased.)
See Page 25 for sizes other than above.
See Page 16 for Combination Wrenches in Sets.

For Weights and Standard Packaging see Pages 5 to 13
or 90 to 98.



NO. E-52

ENGINEERS' WRENCH DISPLAY NO. E-52

15° ANGLE — DOUBLE HEAD

BILLINGS' VITALLOY® FORGED ENGINEERS' WRENCHES are drop forged from special analysis alloy steel, heat treated. Light in weight yet engineered to give maximum performance. Jaws are tapered, thin and have openings uniformly accurate, milled or broached. Surfaces and edges are smooth with polished heads. Sizes of openings displayed range from 5/16" to 1 1/16" and will fit 113 different nuts, bolts or screws. Class number, size opening and trade mark stamped on heads of all sizes. Display is natural finish plywood, 1 x 2 ft.

See Page 23 for additional data and sizes.

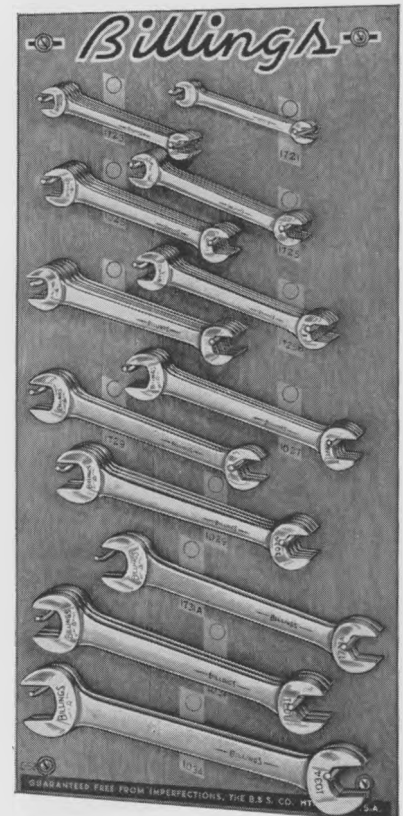
CONTENTS:

FINISH — HEAVY CHROME PLATE OVER COPPER AND NICKEL, HEADS POLISHED

Quantity	Vitalloy Forged Wrench No.	Nominal Openings	Quantity	Vitalloy Forged Wrench No.	Nominal Openings
4	1721	5/16 & 3/8	4	1027	19/32 & 11/16
6	1723	3/8 & 7/16	3	1729	5/8 & 3/4
6	1725	7/16 & 1/2	4	1029	11/16 & 25/32
6	1025	1/2 & 19/32	2	1731A	3/4 & 7/8
6	1725B	1/2 & 9/16	3	1031	25/32 & 7/8
6	1727	9/16 & 5/8	2	1034	7/8 & 1 1/16

E-52 Wrench Board Display, complete with board.
(No charge for board when assortment is purchased.)
See Page 23 for sizes other than above.
See Page 15 for Engineers' Wrenches in Sets.

For Weights and Standard Packaging see Pages 5 to 13
or 90 to 98.



BILLINGS VITALLOY® FORGED WRENCHES **45° ANGLE BOX — 15° ANGLE BOX** **LONG PATTERN**

NO. B-40



45° BOX WRENCH DISPLAY NO. B-40

LONG PATTERN

Displays the more popular sizes of BILLINGS' VITALLOY® FORGED 45° BOX WRENCHES drop forged from selected alloy steel, scientifically heat treated. Heads have clean, accurate 12 point openings with each wrench having a different size opening each end. 45° Angle permits ample space between work and knuckles. Handles are smooth and have a good balance or "feel" in each length wrench. Thin side walls for close-quarter work increase the efficiency of these very practical and popular wrenches. The wrenches on B-40 Display fit 110 different sizes of nuts, bolts or screws. Natural finish plywood board, 1 x 2 ft. Complete in shipping carton.

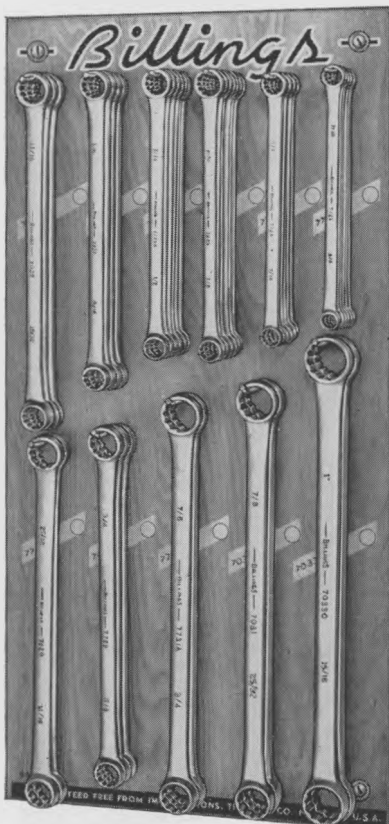
CONTENTS:

FINISH — HEAVY CHROME PLATE OVER COPPER AND NICKEL, HEADS POLISHED

Quan- tity	Vitalloy Forged Wrench No.	Nominal Openings	Quan- tity	Vitalloy Forged Wrench No.	Nominal Openings
6	8723	3/8 & 7/16	3	8729	5/8 & 3/4
6	8725	7/16 & 1/2	2	8029	11/16 & 25/32
5	8025	1/2 & 19/32	2	8731A	3/4 & 7/8
6	8725B	1/2 & 9/16	2	8031	25/32 & 7/8
3	8727	9/16 & 5/8	2	8034	7/8 & 1 1/16
3	8027	19/32 & 11/16			

B-40 Wrench Board Display, complete with board.
 (No charge for board when assortment is purchased.)
 See Page 27 for sizes other than above.
 See Page 17 for 45° Box Wrenches in lots.

NO. B-42



15° BOX WRENCH DISPLAY NO. B-42

LONG PATTERN

BILLINGS' VITALLOY® FORGED 15° Angle BOX WRENCHES drop forged from selected alloy steel and heat treated to the Billings' standard of quality for uniform strength. Thin side walls permit efficient application in close quarters, light weight, correctly proportioned in all sizes. Heads have clean 12 point openings, two different sizes to each wrench, and with sizes clearly stamped on handle. The wrenches on No. B-42 Display fit 110 different sizes of nuts, bolts or screws. The natural finish plywood board measures 1 x 2 ft. Complete in shipping carton.

CONTENTS:

FINISH — HEAVY CHROME PLATE OVER COPPER AND NICKEL, HEADS POLISHED

Quan- tity	Vitalloy Forged Wrench No.	Nominal Openings	Quan- tity	Vitalloy Forged Wrench No.	Nominal Openings
6	7723	3/8 & 7/16	3	7729	5/8 & 3/4
6	7725	7/16 & 1/2	2	7029	11/16 & 25/32
6	7025	1/2 & 19/32	2	7731A	3/4 & 7/8
6	7725B	1/2 & 9/16	2	7031	25/32 & 7/8
4	7727	9/16 & 5/8	2	7033C	15/16 & 1
3	7027	19/32 & 11/16			

B-42 Wrench Board Display, complete with board.
 (No charge for board when assortment is purchased.)
 See Page 26 for sizes other than above.
 See Page 17 for 15° Box Wrenches in sets.

For Weights and Standard Packaging see Pages 5 to 13
 or 90 to 98.

® Trade Mark Registered

BILLINGS VITALLOY® FORGED SOCKETS

"CADET" SERIES — "STANDARD" SERIES

3/8" SQUARE DRIVE 1/2" SQUARE DRIVE

wrench boards **DISPLAYS**

NO. C-48

3/8" SOCKET WRENCH DISPLAY NO. C-48

BILLINGS' VITALLOY® FORGED SOCKETS AND HANDLE attachments in the practical "CADET" SERIES, hot forged from selected alloy steel, heat treated. Extra thin, straight sidewall Sockets in the Regular and Deep Wall style, Universal Flex Sockets plus an assortment of Handle Parts. Heavy chrome plate finish. 1 x 2 ft. natural finish plywood.

CONTENTS:

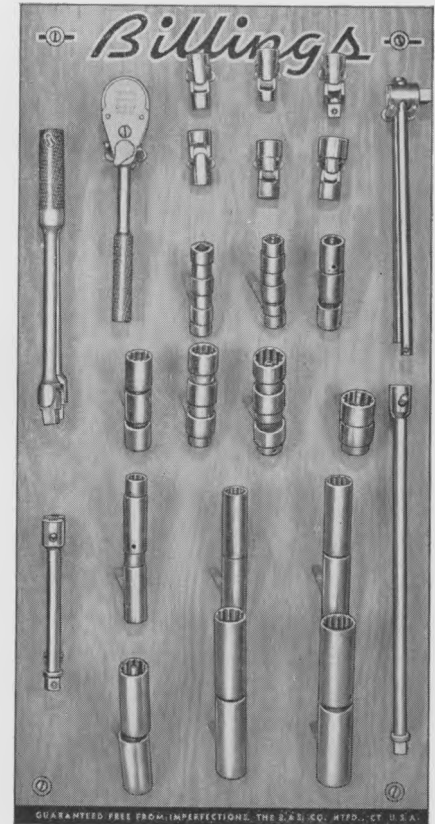
FINISH — HEAVY CHROME PLATE

"CADET" SERIES

12 Pt. DOUBLE HEX REGULAR			12 Pt. DOUBLE HEX EXTRA DEEP			12 Pt. UNIVERSAL FLEX		
Qty.	Vitalloy Forged Socket No.	Nominal Opening	Qty.	Vitalloy Forged Socket No.	Nominal Opening	Qty.	Vitalloy Forged Socket No.	Nominal Opening
3	C-1212	3/8				1	CU-1212	3/8
3	C-1214	7/16	2	CD-1214	7/16	1	CU-1214	7/16
3	C-1216	1/2	2	CD-1216	1/2	1	CU-1216	1/2
3	C-1218	9/16	2	CD-1218	9/16	1	CU-1218	9/16
3	C-1220	5/8	2	CD-1220	5/8	1	CU-1220	5/8
3	C-1222	11/16	2	CD-1222	11/16			
3	C-1224	3/4	2	CD-1224	3/4			

HANDLES AND PARTS

- 2 C-147 Reversible Ratchets — 7" long
 - 2 C-118 Flex Handle — 8 1/4" long
 - 2 C-128 Sliding "T" Handle — 8" long
 - 2 C-135 Extension — 5 1/2" long
 - 2 C-1312 Extension — 12" long
 - 1 C-180 Universal Joint
- C-48 Socket Wrench Display, complete with board.
(No charge for board when assortment is purchased.)
See Pages 28 to 32 inclusive for complete 3/8" Square Drive Line.



1/2" SOCKET WRENCH DISPLAY NO. S-75

Displaying the very popular "STANDARD" SERIES in the 12 Pt. double hex and the 8 Pt. double square BILLINGS' VITALLOY® FORGED Sockets and Handle attachments. Hot forged from selected alloy steel, heat treated. Sockets extra thin, straight sidewalls, inside socket base clean, lock-on feature. Heavy chrome plate finish. Natural finish plywood, 1 x 2 ft.

CONTENTS:

FINISH — HEAVY CHROME PLATE

"STANDARD" SERIES

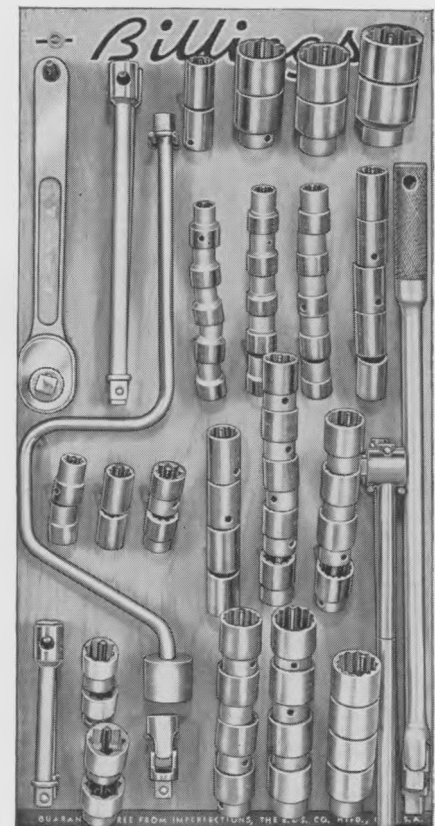
12 Pt. DOUBLE HEX — REGULAR			8 Pt. DOUBLE SQUARE		
Quantity	Vitalloy Forged Socket No.	Nominal Opening	Quantity	Vitalloy Forged Socket No.	Nominal Opening
5	S-1214	7/16	2	S-814	7/16
5	S-1216	1/2	2	S-816	1/2
5	S-1218	9/16	2	S-818	9/16
2	S-1219	19/32	2	S-820	5/8
5	S-1220	5/8	2	S-824	3/4
4	S-1222	11/16			
5	S-1224	3/4			
4	S-1226	13/16			
4	S-1228	7/8			
4	S-1230	15/16			
4	S-1232	1			
2	S-1234	1 1/16			
2	S-1236	1 1/8			
2	S-1240	1 1/4			

HANDLES AND PARTS

- 2 S-1410 Reversible Ratchets — 10 1/2" long
- 1 S-1018 Speeder — 18" long
- 2 S-1118 Flex Handles — 18" long
- 2 S-1211 Sliding "T" Handle — 11" long
- 2 S-135 Extensions — 5" long
- 2 S-1310 Extensions — 10" long
- 1 S-180 Universal Joint

S-75 Socket Wrench Display, complete with board.
(No charge for board when assortment is purchased.)
See Pages 33 to 40 inclusive for complete 1/2" Square Drive Line.
For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

NO. S-75



BILLINGS VITALLOY® FORGED SOCKETS **"HEAVY DUTY" SERIES — 3/4" SQUARE DRIVE**

NO. H-24

3/4" SOCKET WRENCH DISPLAY NO. H-24

BILLINGS' VITALLOY® FORGED SOCKETS and SOCKET HANDLES in the "HEAVY DUTY" SERIES for rugged work where brute strength is a "must". Hot forged from selected alloy steel, heat treated, thin straight walls, teeth cleanly cut, smooth inside socket bases, Lock-on feature, sizes plainly stamped on each socket. Handles correctly balanced for proper leverage and with a heavy chrome plate on each.

FINISH — HEAVY CHROME PLATE

"HEAVY DUTY" SERIES

CONTENTS:

12 POINT DOUBLE HEX SOCKETS

Quantity	Vitalloy Forged Socket Number	Nominal Opening	Quantity	Vitalloy Forged Socket Number	Nominal Opening
2	H-1234	1 1/16	1	H-1250	1 9/16
2	H-1236	1 1/8	1	H-1252	1 5/8
1	H-1238	1 3/16	1	H-1254	1 11/16
2	H-1240	1 1/4	1	H-1256	1 3/4
2	H-1242	1 5/16	1	H-1258	1 13/16
1	H-1244	1 3/8	1	H-1260	1 7/8
1	H-1246	1 7/16	1	H-1264	2
1	H-1248	1 1/2			

Qty.

HANDLES AND PARTS

- 1 H-1421 Reversible Ratchet — 21" long
- 1 H-1121 Flex Handle — 21" long
- 1 H-1220 Sliding "T" Handle — 20" long
- 1 H-138 Extension — 8" long
- 1 H-1316 Extension — 16" long

H-24 Socket Wrench Display, complete with board.
 (No charge for board when assortment is purchased.)
 See Pages 40 to 42 inclusive for complete 3/4" Sq. Dr. line.

FEATURE FACTS ABOUT BILLINGS VITALLOY® STEEL WRENCHES



● HEADS

Billings' Vitalloy Forged Wrenches in these Sets are made of selected alloy steel . . . The Heads are ground and polished.

● FINISH

The exceptionally fine finish is obtained by first giving the wrench a copper coat as a base. Next, nickel over the copper and finally a heavy chrome plate.

● ALLOY STEEL

Unretouched cross section of Billings' Vitalloy Forged Wrench showing how the steel fibres (or grain) are arranged by drop forging to give extra strength.

® Trade Mark Registered

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.



BILLINGS VITALLOY® FORGED WRENCHES

15° ANGLE — DOUBLE HEAD

15° angle
double head **ENGINEERS'**

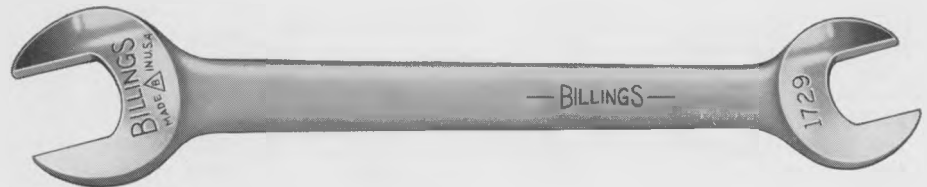
The aristocrat of the wrench industry!

BILLINGS' VITALLOY® FORGED ENGINEERS' WRENCHES climax the experience, the workmanship, the on-the-job testing and the latest of engineering skills gleaned over more than three quarters of a century of wrench making. They are made from special analysis alloy steel, heat treated in modern controlled furnaces. Openings are clean, accurately shaped. Tapered jaws for cramped quarters. Heads are thin, skillfully engineered to proper thickness in all lengths. Sides of heads smooth and well rounded into handle. Class number, size and Billings' trade mark stamped on polished face. Each wrench has two different size openings. The wrench has a fine balance or "feel". VITALLOY® FORGED WRENCHES are lighter, stronger and made to last.

**VITALLOY®
FORGED**

See Page 83 for
Metric Standard.

Billings' Vitalloy® Forged Engineers' Wrenches also furnished in Sets — see Page 15 and on Display Boards — see Page 19.



FINISH — HEAVY CHROME PLATE OVER COPPER AND NICKEL, HEADS POLISHED

Vitalloy Forged Wrench No.	Nominal Openings	Amer. Std. Heavy Nut (USS) Size Bolts	Amer. Std. Hex Head Cap Screws Dia. Screws	Amer. Std. Light Nut (SAE) Size Bolts	Amer. Std. Reg. Nut Size Bolts	Length (App.)	Thick-ness Heads	Vitalloy Forged Wrench No.
1019	3/16 & 1/4	— & —	— & —	— & —	†2, †3 & †4	3	9/64	1019
1020	1/4 & 5/16	— & —	— & —	— & —	†4 & †5, †6	3 1/2	5/32	1020
1720	5/16 & 11/32	— & —	— & —	— & —	†5, †6 & †8	4 1/2	3/16	1720
1721	5/16 & 3/8	— & —	— & —	— & —	†5, †6 & †10	4 1/2	3/16	1721
1723	3/8 & 7/16	— & —	— & 1/4	— & 1/4	†10 & 1/4, †12	5	7/32	1723
1725	7/16 & 1/2	— & 1/4	1/4 & 5/16	1/4 & 5/16	1/4, †12 & —	5 3/4	7/32	1725
1725A	7/16 & 9/16	— & —	1/4 & 3/8	1/4 & 3/8	1/4, †12 & 5/16	6	7/32	1725A
1725B	1/2 & 9/16	1/4 & —	5/16 & 3/8	5/16 & 3/8	— & 5/16	6 1/4	15/64	1725B
1025	1/2 & 19/32	1/4 & 5/16	5/16 & —	5/16 & —	— & —	6 1/4	15/64	1025
1727	9/16 & 5/8	— & —	3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	6 3/4	17/64	1727
1027	19/32 & 11/16	5/16 & 3/8	— & —	— & —	— & —	7 1/2	9/32	1027
1027B	5/8 & 11/16	— & 3/8	7/16 & —	7/16 & —	3/8 & —	7 1/2	9/32	1027B
1028	19/32 & 25/32	5/16 & 7/16	— & —	— & —	— & —	7 3/4	9/32	1028
1729	5/8 & 3/4	— & —	7/16 & 1/2	7/16 & 1/2	3/8 & 7/16	7 3/4	9/32	1729
1029	11/16 & 25/32	3/8 & 7/16	— & —	— & —	— & —	8 1/4	5/16	1029
1029B	11/16 & 3/4	3/8 & —	— & 1/2	— & 1/2	— & 7/16	8 1/4	5/16	1029B
1029C	11/16 & 13/16	3/8 & —	— & 9/16	— & —	— & 1/2	8 1/4	5/16	1029C
1731	3/4 & 13/16	— & —	1/2 & 9/16	1/2 & —	7/16 & 1/2	9	11/32	1731
1731A	3/4 & 7/8	— & 1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	9	11/32	1731A
1031B	25/32 & 13/16	7/16 & —	— & 9/16	— & —	— & 1/2	9 1/2	11/32	1031B
1031	25/32 & 7/8	7/16 & 1/2	— & 5/8	— & 9/16	— & 9/16	9 1/2	11/32	1031
1731B	13/16 & 7/8	— & 1/2	9/16 & 5/8	— & 9/16	1/2 & 9/16	9 1/2	11/32	1731B
1032B	13/16 & 15/16	— & 9/16	9/16 & —	— & 5/8	1/2 & —	10 1/4	3/8	1032B
1033A	7/8 & 15/16	1/2 & 9/16	5/8 & —	9/16 & 5/8	9/16 & —	10 1/4	3/8	1033A
1733	7/8 & 1	1/2 & —	5/8 & 3/4	9/16 & —	9/16 & 5/8	10 1/4	3/8	1733
1033C	15/16 & 1	9/16 & —	— & 3/4	5/8 & —	— & 5/8	11	13/32	1033C
1034	7/8 & 1 1/16	1/2 & 5/8	5/8 & —	9/16 & 3/4	9/16 & —	11	13/32	1034
1034A	15/16 & 1 1/16	9/16 & 5/8	— & —	5/8 & 3/4	— & —	11	13/32	1034A
1735	1 & 1 1/8	— & —	3/4 & 7/8	— & —	5/8 & 3/4	12 1/2	15/32	1735
1036B	1 1/16 & 1 1/8	5/8 & —	— & 7/8	3/4 & —	— & 3/4	12 1/2	15/32	1036B
1037	1 1/16 & 1 1/4	5/8 & 3/4	— & *1	3/4 & 7/8	— & —	12 1/2	15/32	1037
1037A	1 1/8 & 1 5/16	— & —	7/8 & 1	— & —	3/4 & 7/8	12 3/4	1/2	1037A
1039B	1 1/4 & 1 5/16	3/4 & —	*1 & 1	7/8 & —	— & 7/8	12 3/4	1/2	1039B
1039	1 1/4 & 1 7/16	3/4 & 7/8	*1 & —	7/8 & 1	— & —	14	9/16	1039
1039A	1 5/16 & 1 1/2	— & —	1 & *1 1/4, 1 1/8	— & —	7/8 & 1	14	9/16	1039A
1039C	1 3/8 & 1 7/16	— & 7/8	*1 1/8 & —	— & 1	— & —	14	9/16	1039C
1041	1 7/16 & 1 5/8	7/8 & 1	— & —	1 & 1 1/8	— & —	16	11/16	1041
1041B	1 1/2 & 1 5/8	— & 1	*1 1/4, 1 1/8 & —	— & 1 1/8	1 & —	16	11/16	1041B

†American Standard Machine Screw and Stove Bolt Nuts.
* Old Style Cap Screws — Now Obsolete.

See Pages 15 and 19 for information regarding
Wrench Sets and Wrench Boards.

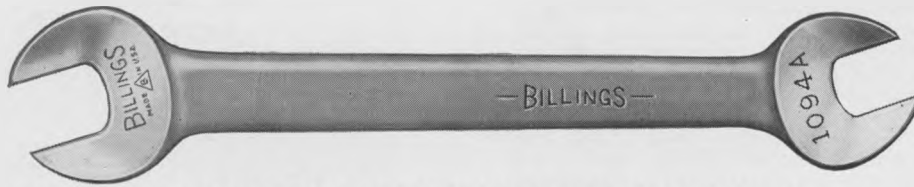
For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

BILLINGS

VITALLOY
Trade Mark Registered

WRENCHES

BILLINGS VITALLOY® FORGED WRENCHES **15° ANGLE DOUBLE HEAD - TAPPET - CHECK NUT**

VITALLOY® FORGED


Thin and light weight especially engineered and designed for hot motor tappet adjustment work. Handles correctly proportioned, jaws tapered, two different size openings, each wrench accurately shaped. VITALLOY® FORGED from special analysis alloy steel, heat treated, heavy chrome plate and with heads polished. See Page 84 for Metric Standard.

FINISH — HEAVY CHROME PLATE OVER COPPER AND NICKEL, HEADS POLISHED

Vitalloy Forged Wrench No.	Nominal Openings	Amer. Std. Heavy Nut (USS) Size Bolts	Amer. Std. Hex Head Cap Screws Dia. Screws	Amer. Std. Light Nut (SAE) Size Bolts	Amer. Std. Reg. Nut Size Bolts	Length (App.)	Thickness of Heads	Vitalloy Forged Wrench No.
1090A	3/8 & 7/16	— & —	— & 1/4	— & 1/4	†10 & †12, 1/4	8 1/2	5/32	1090A
1090B	13/32 & 1/2	— & 1/4	— & 5/16	— & 5/16	— & —	8 1/2	5/32	1090B
1090	7/16 & 1/2	— & 1/4	1/4 & 5/16	1/4 & 5/16	†12, 1/4 & —	8 1/2	5/32	1090
1090C	7/16 & 9/16	— & —	1/4 & 3/8	1/4 & 3/8	†12, 1/4 & 5/16	8 1/2	5/32	1090C
1090D	1/2 & 9/16	1/4 & —	5/16 & 3/8	5/16 & 3/8	— & 5/16	8 1/2	5/32	1090D
1090E	1/2 & 19/32	1/4 & 5/16	5/16 & —	5/16 & —	— & —	8 1/2	5/32	1090E
1092B	1/2 & 11/16	1/4 & 3/8	5/16 & —	5/16 & —	— & —	9	3/16	1092B
1092	9/16 & 5/8	— & —	3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	9	3/16	1092
1092D	19/32 & 11/16	5/16 & 3/8	— & —	— & —	— & —	9	3/16	1092D
1092F	5/8 & 11/16	— & 3/8	7/16 & —	7/16 & —	3/8 & —	9	3/16	1092F
1094A	5/8 & 3/4	— & —	7/16 & 1/2	7/16 & 1/2	3/8 & 7/16	9 1/2	7/32	1094A
1094B	19/32 & 25/32	5/16 & 7/16	— & —	— & —	— & —	9 1/2	7/32	1094B
1094D	11/16 & 25/32	3/8 & 7/16	— & —	— & —	— & —	9 1/2	7/32	1094D
1094F	11/16 & 7/8	3/8 & 1/2	— & 5/8	— & 9/16	— & 9/16	9 1/2	7/32	1094F
1094G	3/4 & 13/16	— & —	1/2 & 9/16	1/2 & —	7/16 & 1/2	9 1/2	7/32	1094G
1094	3/4 & 7/8	— & 1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	9 1/2	7/32	1094
1096A	25/32 & 7/8	7/16 & 1/2	— & 5/8	— & 9/16	— & 9/16	10	7/32	1096A
1096F	7/8 & 15/16	1/2 & 9/16	5/8 & —	9/16 & 5/8	9/16 & —	10	7/32	1096F
1096H	7/8 & 1 1/16	1/2 & 5/8	5/8 & —	9/16 & 3/4	9/16 & —	10	7/32	1096H
1096	15/16 & 1	9/16 & —	— & 3/4	5/8 & —	— & 5/8	10	7/32	1096
1096 Sp	3/4 & 1 1/16	— & 5/8	1/2 & —	1/2 & 3/4	7/16 & —	10	7/32	1096 Sp

† American Standard Machine Screw and Stove Bolt Nuts.

IN SETS

SET NO. 46 contains two each of the following Tappet Wrenches:

Vitalloy Forged Wrench No.	Nominal Openings	Length (App.)	Thickness of Heads	Vitalloy Forged Wrench No.
1090	7/16 & 1/2	8 1/2	5/32	1090
1092	9/16 & 5/8	9	3/16	1092

SET NO. 47 contains two each of the following Tappet Wrenches:

Vitalloy Forged Wrench No.	Nominal Openings	Length (App.)	Thickness of Heads	Vitalloy Forged Wrench No.
1090-D	1/2 & 9/16	8 1/2	5/32	1090-D
1092-F	5/8 & 11/16	9	3/16	1092-F
1094	3/4 & 7/8	9 1/2	7/32	1094

SET NO. 48 contains two each of the following Tappet Wrenches:

Vitalloy Forged Wrench No.	Nominal Openings	Length (App.)	Thickness of Heads	Vitalloy Forged Wrench No.
1090	7/16 & 1/2	8 1/2	5/32	1090
1090-D	1/2 & 9/16	8 1/2	5/32	1090-D
1092-F	5/8 & 11/16	9	3/16	1092-F
1094	3/4 & 7/8	9 1/2	7/32	1094

SETS NOS. 46, 47, 48 furnished in pasteboard box or Leatherette Roll.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

® Trade Mark Registered



BILLINGS VITALLOY® FORGED WRENCHES 15° AND 75° ANGLE ELECTRICAL

15° and 75° **ELECTRICAL**

Thin and slender yet of ample strength for magneto, generator, carburetor, radio and other types of electrical work where delicate adjustments are necessary. These time saver wrenches have the same nominal openings in each end but have two different angles making them invaluable in getting into those hard to get places. Openings are clean, accurate; handles of correct length; drop forged from special analysis alloy steel, heat treated. Furnished in SETS shown below.

VITALLOY® FORGED



SET NO. E-9 CONTENTS:

One each Nos. 1112 - 1113 - 1114 - 1115 - 1116 - 1118 - 1120 - 1122 - 1128 wrenches in leatherette roll.

FINISH — HEAVY CHROME PLATE OVER COPPER AND NICKEL, HEADS POLISHED

Vitalloy Forged Wrench No.	Nominal Openings	Length (App.)	Thickness of Heads	Vitalloy Forged Wrench No.
1112	3/16	3 1/16	3/32	1112
1113	13/64	3 1/16	3/32	1113
1114	7/32	3 1/16	3/32	1114
1115	15/64	3 1/16	3/32	1115
1116	1/4	3 1/16	3/32	1116
1118	9/32	3 3/4	1/8	1118
1120	5/16	3 3/4	1/8	1120
1122	11/32	3 13/16	1/8	1122
1124	3/8	3 13/16	1/8	1124
1128	7/16	4 9/16	5/32	1128
1132	1/2	4 9/16	5/32	1132

COMBINATION BOX AND OPEN END

This wrench combines the best features of both the open end engineers' wrench and the 15° Box Wrench. Box End can be used for loosening stubborn nuts also for final tightening of nuts. Open Ends used for speed in operation. Both heads have same size opening. Many other practical uses due to the combination of different type openings. Drop forged from special analysis alloy steel, heat treated and finely finished, balanced and with opening size stamped on both ends of the wrenches.

box & open head **COMBINATION**

VITALLOY® FORGED



FINISH — HEAVY CHROME PLATE OVER COPPER AND NICKEL, HEADS POLISHED

Vitalloy Forged Wrench No.	Nominal Openings	Thickness Open End	Thickness Box End	Outside Diameter (Box End)	Bolt Sizes				Length (App.)	Vitalloy Forged Wrench No.
					Amer. Std. Heavy Nut (USS) Size Bolts	Amer. Std. Hex Head Cap Screws Dia. Screws	Amer. Std. Light Nut (SAE) Size Bolts	Amer. Std. Reg. Nut Size Bolts		
1159	5/16	11/64	15/64	9/16	—	—	—	†5, †6	4 1/2	1159
1159A	11/32	11/64	15/64	9/16	—	—	—	†8	4 1/2	1159A
1160	3/8	11/64	17/64	5/8	—	—	—	†10	5	1160
1161	7/16	13/64	5/16	43/64	—	1/4	1/4	†12, 1/4	5 3/8	1161
1162	1/2	15/64	11/32	25/32	1/4	5/16	5/16	—	6	1162
1163	9/16	1/4	23/64	7/8	—	3/8	3/8	5/16	6 3/4	1163
1163A	19/32	1/4	23/64	7/8	5/16	—	—	—	6 3/4	1163A
1164	5/8	9/32	3/8	15/16	—	7/16	7/16	3/8	7 5/8	1164
1165	11/16	19/64	13/32	1 1/32	3/8	—	—	—	8 1/2	1165
1166	3/4	21/64	7/16	1 1/8	—	1/2	1/2	7/16	9 1/2	1166
1166A	25/32	21/64	7/16	1 1/8	7/16	—	—	—	9 1/2	1166A
1167A	13/16	23/64	1/2	1 9/32	—	9/16	—	1/2	11	1167A
1167	7/8	23/64	1/2	1 9/32	1/2	5/8	9/16	9/16	11	1167
1168	15/16	25/64	9/16	1 15/32	9/16	—	5/8	—	13	1168
1170	1	25/64	9/16	1 15/32	—	3/4	—	5/8	13	1170
1171	1 1/16	15/32	5/8	1 19/32	5/8	—	3/4	—	15	1171
1172	1 1/8	15/32	5/8	1 19/32	—	7/8	—	3/4	15	1172
1173	1 1/4	17/32	23/32	1 13/16	3/4	*1	7/8	—	18	1173
1174	1 5/16	17/32	23/32	1 13/16	—	1	—	7/8	18	1174
1176	1 7/16	5/8	13/16	2 3/32	7/8	—	1	—	21	1176

† American Standard Machine Screw and Stove Bolt Nuts.

* Old Style Cap Screw — Now Obsolete.

See Pages 16 and 19 for information regarding Wrench Sets and Wrench Boards.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

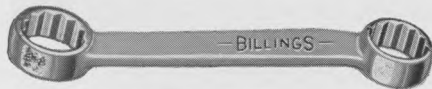
BILLINGS

VITALLOY
Trade Mark Registered

WRENCHES

BILLINGS VITALLOY® FORGED WRENCHES **15° ANGLE—12 POINT DOUBLE HEX**

VITALLOY® FORGED **SHORT PATTERN**



The practical wrench for modern service applications. The 15° angle eliminates bruised knuckles and gets in the tough spots. Handles in each size correctly proportioned. Chamfer on top and base of openings "gets" the nut or bolt quickly and the cleanly cut teeth hold with a sure grip. Made from special analysis alloy steel, expertly heat treated and finished. Sidewalls thin, two different openings, each wrench accurately sized and stamped on handle. A well balanced wrench and an efficient addition to any tool box.

FINISH—HEAVY CHROME PLATE OVER COPPER AND NICKEL, HEADS POLISHED

Vitalloy Forged Wrench No.	Nominal Openings	Amer. Std. Heavy Nut (USS) Size Bolts	Amer. Std. Hex Head Cap Screws Dia. Screws	Amer. Std. Light Nut (SAE) Size Bolts	Amer. Std. Reg. Nut Size Bolts	Length (App.)	Vitalloy Forged Wrench No.
6723	3/8 & 7/16	— & —	— & 1/4	— & 1/4	†10 & 1/4, †12	4 1/2	6723
6725	7/16 & 1/2	— & 1/4	1/4 & 5/16	1/4 & 5/16	1/4, †12 & —	5 1/2	6725
6725A	7/16 & 9/16	— & —	1/4 & 3/8	1/4 & 3/8	1/4, †12 & 5/16	5 1/2	6725A
6725B	1/2 & 9/16	1/4 & —	5/16 & 3/8	5/16 & 3/8	— & 5/16	5 1/2	6725B
6025	1/2 & 19/32	1/4 & 5/16	5/16 & —	5/16 & —	— & —	5 1/2	6025
6727	9/16 & 5/8	— & —	3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	6	6727

LONG PATTERN



Engineered to the correct length to permit maximum leverage and to reach hard-to-get-at places. Mechanics know the efficient uses to which this LONG PATTERN BOX WRENCH applies.

FINISH—HEAVY CHROME PLATE OVER COPPER AND NICKEL, HEADS POLISHED

Vitalloy Forged Wrench No.	Nominal Openings	Amer. Std. Heavy Nut (USS) Size Bolts	Amer. Std. Hex Head Cap Screws Dia. Screws	Amer. Std. Light Nut (SAE) Size Bolts	Amer. Std. Reg. Nut Size Bolts	Length (App.)	Vitalloy Forged Wrench No.
7723	3/8 & 7/16	— & —	— & 1/4	— & 1/4	†10 & 1/4, †12	7 3/8	7723
7725	7/16 & 1/2	— & 1/4	1/4 & 5/16	1/4 & 5/16	1/4, †12 & —	7 3/4	7725
7725A	7/16 & 9/16	— & —	1/4 & 3/8	1/4 & 3/8	1/4, †12 & 5/16	8 1/4	7725A
7725B	1/2 & 9/16	1/4 & —	5/16 & 3/8	5/16 & 3/8	— & 5/16	8 1/4	7725B
7025	1/2 & 19/32	1/4 & 5/16	5/16 & —	5/16 & —	— & —	8 1/4	7025
7727	9/16 & 5/8	— & —	3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	9 1/4	7727
7027	19/32 & 11/16	5/16 & 3/8	— & —	— & —	— & —	10 1/2	7027
7727A	5/8 & 11/16	— & 3/8	7/16 & —	7/16 & —	3/8 & —	10 1/2	7727A
7729	5/8 & 3/4	— & —	7/16 & 1/2	7/16 & 1/2	3/8 & 7/16	10 1/2	7729
7029B	11/16 & 3/4	3/8 & —	— & 1/2	— & 1/2	— & 7/16	11	7029B
7029	11/16 & 25/32	3/8 & 7/16	— & —	— & —	— & —	11	7029
7729A	3/4 & 25/32	— & 7/16	1/2 & —	1/2 & —	7/16 & —	12	7729A
7731A	3/4 & 7/8	— & 1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	12	7731A
7031B	25/32 & 13/16	7/16 & —	— & 9/16	— & —	— & 1/2	12 1/2	7031B
7031	25/32 & 7/8	7/16 & 1/2	— & 5/8	— & 9/16	— & 9/16	12 1/2	7031
7731B	13/16 & 7/8	— & 1/2	9/16 & 5/8	— & 9/16	1/2 & 9/16	12 1/2	7731B
7033A	7/8 & 15/16	1/2 & 9/16	5/8 & —	9/16 & 5/8	9/16 & —	13 3/4	7033A
7733	7/8 & 1	1/2 & —	5/8 & 3/4	9/16 & —	9/16 & 5/8	13 3/4	7733
7033C	15/16 & 1	9/16 & —	— & 3/4	5/8 & —	— & 5/8	13 3/4	7033C
7034A	15/16 & 1 1/16	9/16 & 5/8	— & —	5/8 & 3/4	— & —	15 1/2	7034A
7735	1 & 1 1/8	— & —	3/4 & 7/8	— & —	5/8 & 3/4	17	7735
7735A	1 1/16 & 1 1/8	5/8 & —	— & 7/8	3/4 & —	— & 3/4	17	7735A
7037	1 1/16 & 1 1/4	5/8 & 3/4	— & *1	3/4 & 7/8	— & —	18	7037
7037A	1 1/8 & 1 5/16	— & —	7/8 & 1	— & —	3/4 & 7/8	18	7037A
7039B	1 1/4 & 1 5/16	3/4 & —	*1 & 1	7/8 & —	— & 7/8	18 1/2	7039B
7039	1 1/4 & 1 7/16	3/4 & 7/8	*1 & —	7/8 & 1	— & —	18 1/2	7039
7039A	1 5/16 & 1 1/2	— & —	1 & *1 1/4, 1 1/8	— & —	7/8 & 1	19	7039A
7040B	1 7/16 & 1 1/2	7/8 & —	— & *1 1/4, 1 1/8	1 & —	— & 1	19	7040B
7041	1 7/16 & 1 5/8	7/8 & 1	*1 & —	1 & 1 1/8	— & —	21	7041
7742B	1 1/2 & 1 11/16	— & —	1 1/8, *1 1/4 & 1 1/4	— & —	1 & 1 1/8	21	7742B

† American Standard Machine Screw and Stove Bolt Nuts.

* Old Style Cap Screws — Now Obsolete.

See Pages 17 and 20 for information regarding Wrench Sets and Wrench Boards.

® Trade Mark Registered

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

BILLINGS VITALLOY® FORGED WRENCHES

45° ANGLE—LONG PATTERN—12 PT. DOUBLE HEX

45° long, 45° short **BOX**

The 45° offset head in both LONG and SHORT PATTERN with thin sidewalls, openings clean and accurate, chamfered top and bottom; handles engineered in correct proportion, stamped with size; drop forged from special analysis alloy steel, heat treated. Different size opening each end.

VITALLOY® FORGED



FINISH — HEAVY CHROME PLATE OVER COPPER AND NICKEL, HEADS POLISHED

LONG PATTERN

Vitalloy Forged Wrench No.	Nominal Openings	Amer. Std. Heavy Nut (USS) Size Bolts	Amer. Std. Hex Head Cap Screws Dia. Screws	Amer. Std. Light Nut (SAE) Size Bolts	Amer. Std. Reg. Nut Size Bolts	Length (App.)	Vitalloy Forged Wrench No.
8723	3/8 & 7/16	— & —	— & 1/4	— & 1/4	†10 & †12, 1/4	6	8723
8725	7/16 & 1/2	— & 1/4	1/4 & 5/16	1/4 & 5/16	†12, 1/4 & —	6 5/8	8725
8725-A	7/16 & 9/16	— & —	1/4 & 3/8	1/4 & 3/8	†12, 1/4 & 5/16	7 5/8	8725-A
8725-B	1/2 & 9/16	1/4 & —	5/16 & 3/8	5/16 & 3/8	— & 5/16	7 3/4	8725-B
8025	1/2 & 19/32	1/4 & 5/16	5/16 & —	5/16 & —	— & —	8	8025
8727	9/16 & 5/8	— & —	3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	9	8727
8027	19/32 & 11/16	5/16 & 3/8	— & —	— & —	— & —	9 1/2	8027
8727-A	5/8 & 11/16	— & 3/8	7/16 & —	7/16 & —	3/8 & —	9 1/2	8727-A
8729	5/8 & 3/4	— & —	7/16 & 1/2	7/16 & 1/2	3/8 & 7/16	10 1/2	8729
8029-B	11/16 & 3/4	3/8 & —	— & 1/2	— & 1/2	— & 7/16	10 3/4	8029-B
8029	11/16 & 25/32	3/8 & 7/16	— & —	— & —	— & —	10 3/4	8029
8729-A	3/4 & 25/32	— & 7/16	1/2 & —	1/2 & —	7/16 & —	11	8729-A
8031-B	25/32 & 13/16	7/16 & —	— & 9/16	— & —	— & 1/2	11 1/2	8031-B
8731-A	3/4 & 7/8	— & 1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	12 1/2	8731-A
8031	25/32 & 7/8	7/16 & 1/2	— & 5/8	— & 9/16	— & 9/16	12 3/4	8031
8731-B	13/16 & 7/8	— & 1/2	9/16 & 5/8	— & 9/16	1/2 & 9/16	12 3/4	8731-B
8033-A	7/8 & 15/16	1/2 & 9/16	5/8 & —	9/16 & 5/8	9/16 & —	15	8033-A
8733	7/8 & 1	1/2 & —	5/8 & 3/4	9/16 & —	9/16 & 5/8	15	8733
8033-C	15/16 & 1	9/16 & —	— & 3/4	5/8 & —	— & 5/8	15 1/2	8033-C
8034-A	15/16 & 1 1/16	9/16 & 5/8	— & —	5/8 & 3/4	— & —	15 1/2	8034-A
8735	1 & 1 1/8	— & —	3/4 & 7/8	— & —	5/8 & 3/4	16 1/2	8735
8735-A	1 1/16 & 1 1/8	5/8 & —	— & 7/8	3/4 & —	— & 3/4	16 1/2	8735-A
8037	1 1/16 & 1 1/4	5/8 & 3/4	— & *1"	3/4 & 7/8	— & —	16 1/2	8037
8037-A	1 1/8 & 1 5/16	— & —	7/8 & 1	— & —	3/4 & 7/8	19	8037-A
8039-B	1 1/4 & 1 5/16	3/4 & —	*1" & 1	7/8 & —	— & 7/8	19	8039-B
8039	1 1/4 & 1 7/16	3/4 & 7/8	*1" & —	7/8 & 1	— & —	19	8039
8039-A	1 5/16 & 1 1/2	— & —	1 & 1 1/8, *1 1/4"	— & —	7/8 & 1	19	8039-A
8040-B	1 7/16 & 1 1/2	7/8 & —	— & 1 1/8, *1 1/4"	1 & —	— & 1	21	8040-B
8041	1 7/16 & 1 5/8	7/8 & 1	— & —	1 & 1 1/8	— & —	23	8041
8742-B	1 1/2 & 1 11/16	— & —	1 1/8, *1 1/4" & 1 1/4	— & —	1 & 1 1/8	23	8742-B
8045	1 13/16 & 2	1 1/8 & 1 1/4	— & —	1 1/4 & 1 3/8	— & —	25	8045
8049	2 3/16 & 2 3/8	1 3/8 & 1 1/2	— & —	1 1/2 & —	— & —	27	8049
8053	2 9/16 & 2 3/4	1 5/8 & 1 3/4	— & —	— & —	— & —	30	8053

BILLINGS VITALLOY® FORGED WRENCHES

45° ANGLE — SHORT PATTERN — 12 PT. DOUBLE HEX



FINISH — HEAVY CHROME PLATE OVER COPPER AND NICKEL, HEADS POLISHED

SHORT PATTERN

Vitalloy Forged Wrench No.	Nominal Openings	Amer. Std. Heavy Nut (USS) Size Bolts	Amer. Std. Hex Head Cap Screws Dia. Screws	Amer. Std. Light Nut (SAE) Size Bolts	Amer. Std. Reg. Nut Size Bolts	Length (App.)	Vitalloy Forged Wrench No.
9723	3/8 & 7/16	— & —	— & 1/4	— & 1/4	†10 & †12, 1/4	4 1/2	9723
9725	7/16 & 1/2	— & 1/4	1/4 & 5/16	1/4 & 5/16	†12, 1/4 & —	5	9725
9725-A	7/16 & 9/16	— & —	1/4 & 3/8	1/4 & 3/8	†12, 1/4 & 5/16	5 1/2	9725-A
9725-B	1/2 & 9/16	1/4 & —	5/16 & 3/8	5/16 & 3/8	— & 5/16	5 1/2	9725-B
9025	1/2 & 19/32	1/4 & 5/16	5/16 & —	5/16 & —	— & —	5 1/2	9025
9727	9/16 & 5/8	— & —	3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	6	9727

† American Standard Machine Screw and Stove Bolt Nuts.
* Old Style Cap Screw — Now Obsolete.

See Pages 17 and 20 for information regarding Wrench Sets and Wrench Boards.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

BILLINGS

VITALLOY
Trade Mark Registered

WRENCHES

BILLINGS VITALLOY® FORGED SOCKETS **"CADET" SERIES — 3/8" SQUARE DRIVE**

"CADET" SERIES



VITALLOY® FORGED
12 POINT
DOUBLE HEX

BILLINGS' VITALLOY® FORGED Sockets embody the design, workmanship, and all the engineered features demanded by experienced socket users.

BILLINGS' FEATURES: (1) Extra thin. (2) Straight sidewalls. (3) Teeth clear cut and accurately formed. (4) Inside base of socket clean and smooth. (5) Lock-on feature — sockets locked to Handles yet readily released. (6) Hot forged from selected alloy steel. (7) Heat treatment scientifically controlled. (8) A pleasing heavy chrome plate finish. (9) Sockets clearly stamped with class number, size opening and trade mark "BILLINGS' VITALLOY®". (10) Rigid inspection of every single socket before packaging to guard and maintain the Billings' high standards of quality and accuracy.

BILLINGS' VITALLOY® FORGED Sockets are compact in design with correctly proportioned socket depth and height in relation to the many size openings, resulting in Detachable Sockets nicely balanced, of greater strength and longer lasting qualities for rapid daily applications.

FINISH — HEAVY CHROME PLATE

12 POINT, DOUBLE HEX SOCKETS

Vitalloy Forged Socket No.	Nominal Opening	Amer. Std. Heavy Nut (USS) Size Bolts	Amer. Std. Hex Head Cap Screws Dia. Screws	Amer. Std. Light Nut (SAE) Size Bolts	Amer. Std. Reg. Nut Size Bolts	Length (App.)	Vitalloy Forged Socket No.
C-1212	3/8	—	—	—	†10	15/16	C-1212
C-1214	7/16	—	1/4	1/4	1/4, †12	15/16	C-1214
C-1216	1/2	1/4	5/16	5/16	—	15/16	C-1216
C-1218	9/16	—	3/8	3/8	5/16	31/32	C-1218
C-1220	5/8	—	7/16	7/16	3/8	1	C-1220
C-1222	11/16	3/8	—	—	—	1 1/32	C-1222
C-1224	3/4	—	1/2	1/2	7/16	1 1/32	C-1224

EXTRA DEEP — 12 POINT, DOUBLE HEX SOCKETS

FINISH — HEAVY CHROME PLATE

Vitalloy Forged Socket No.	Nominal Opening	Amer. Std. Heavy Nut (USS) Size Bolts	Amer. Std. Hex Head Cap Screws Dia. Screws	Amer. Std. Light Nut (SAE) Size Bolts	Amer. Std. Reg. Nut Size Bolts	Length (App.)	Vitalloy Forged Socket No.
CD-1214	7/16	—	1/4	1/4	1/4, †12	2	CD-1214
CD-1216	1/2	1/4	5/16	5/16	—	2	CD-1216
CD-1218	9/16	—	3/8	3/8	5/16	2	CD-1218
CD-1220	5/8	—	7/16	7/16	3/8	2	CD-1220
CD-1222	11/16	3/8	—	—	—	2 1/2	CD-1222
CD-1224	3/4	—	1/2	1/2	7/16	2 1/2	CD-1224

FINISH — HEAVY CHROME PLATE

12 POINT, UNIVERSAL FLEX

Vitalloy Forged Universal Flex No.	Nominal Opening	Amer. Std. Heavy Nut (USS) Size Bolts	Amer. Std. Hex Head Cap Screws Dia. Screws	Amer. Std. Light Nut (SAE) Size Bolts	Amer. Std. Reg. Nut Size Bolts	Length (App.)	Vitalloy Forged Universal Flex No.
CU-1212	3/8	—	—	—	†10	1 1/2	CU-1212
CU-1214	7/16	—	1/4	1/4	1/4, †12	1 9/16	CU-1214
CU-1216	1/2	1/4	5/16	5/16	—	1 19/32	CU-1216
CU-1218	9/16	—	3/8	3/8	5/16	1 5/8	CU-1218
CU-1220	5/8	—	7/16	7/16	3/8	1 3/4	CU-1220
CU-1222	11/16	3/8	—	—	—	1 25/32	CU-1222
CU-1224	3/4	—	1/2	1/2	7/16	1 13/16	CU-1224

†For American Standard Machine Screw and Stove Bolt Nuts.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

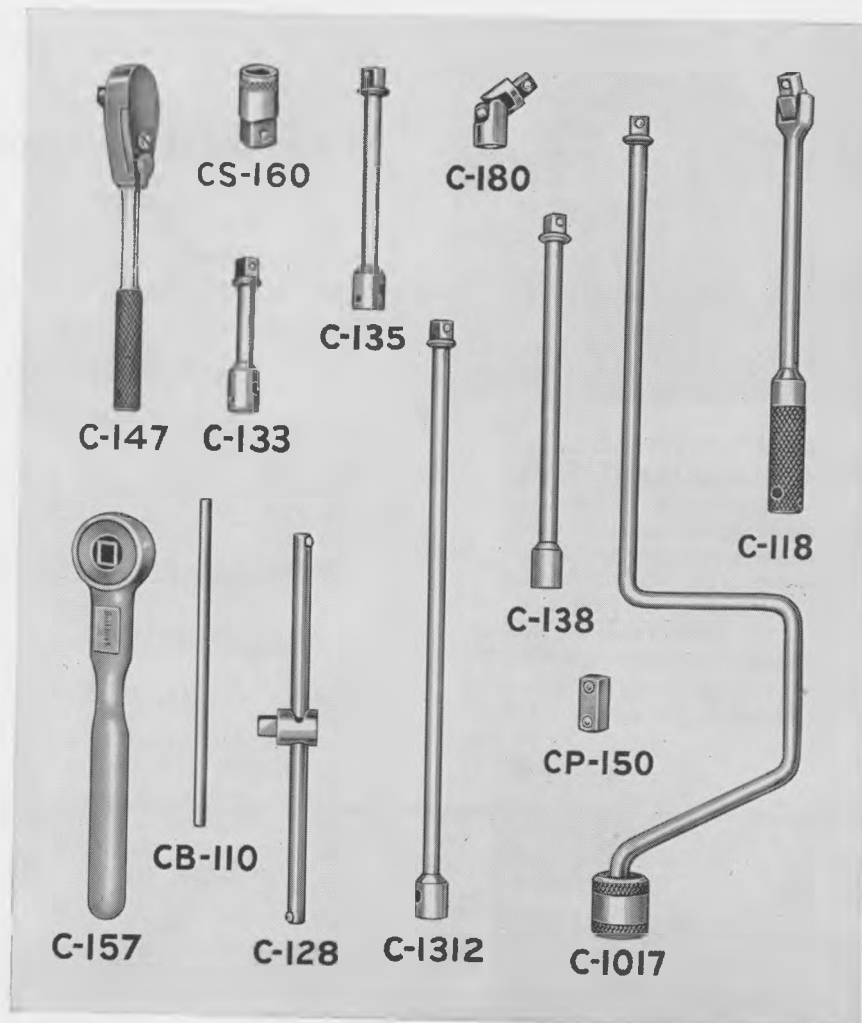
® Trade Mark Registered



BILLINGS VITALLOY® FORGED SOCKETS
"CADET" SERIES — 3/8" SQUARE DRIVE

3/8" sq. dr. SOCKET PARTS

"CADET" SERIES



VITALLOY® FORGED DETACHABLE SOCKET PARTS
"CADET" SERIES — 3/8" SQUARE DRIVE

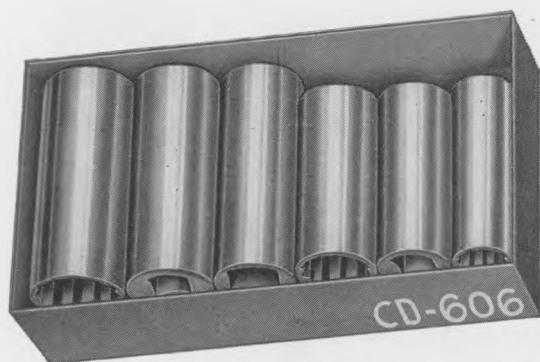
Vitalloy Forged Parts No.	Description
C-147	Reversible Ratchet — 7" Long with Knurled Handle
C-157	Ratchet 6 3/4" Long — Complete with CP-150 Plug Conn.
CP-150	Ratchet Plug Connector
C-1017	Speeder — 17" Long with Knurled Revolving Grip
C-118	Flex Handle — 8 1/4" Long with Knurled Handle
CB-110	Flex Handle Bar — 6 1/2" Long
C-128	Sliding T Handle — 8" Long
C-133	Extension — 3" Long
C-135	Extension — 5 1/2" Long
C-138	Extension — 8 1/2" Long
C-1312	Extension — 12" Long
C-180	Universal Joint
CS-160	Adapter 3/8" to 1/2" increase — Adapts 3/8" Square Drive Handles and Parts to 1/2" Square Drive Sockets

The "CADET" SERIES Handles and assorted attachments are drop forged from selected alloy steel and are strong, light in weight and designed with the proper balance and "feel". Grips are comfortable. Lock-on feature locks Sockets to Handles yet permits quick release. Heavy chrome plate finish on all Handles and Parts.

The "CADET" SERIES — 3/8" Square Drive is used daily by service men and workers on refrigerators, radios, electrical devices, airplane and automobile motors.

All BILLINGS VITALLOY® FORGED Detachable Socket Parts are guaranteed against defects in workmanship and material.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

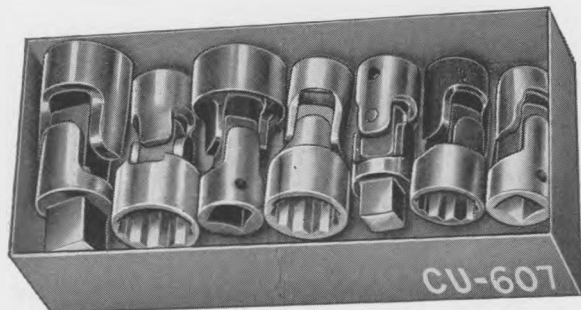
"CADET" SERIES

CD-606 DETACHABLE SOCKET SET

Service men on radar, radio, refrigerator, small motor and electrical devices will find this set of six BILLINGS' VITALLOY® FORGED Sockets in the "CADET" Series — $\frac{3}{8}$ " Sq. Dr. — a very practical aid in their work. Openings range from $\frac{7}{16}$ " to $\frac{3}{4}$ ". Socket walls are thin, straight and extra deep for getting into those tough spots. Handles and Parts are shown on Page 29. The finish — heavy chrome plate — is protective and good looking.

CD-606 DETACHABLE SOCKET SET
CONTENTS:
12 POINT, DOUBLE HEX EXTRA DEEP SOCKETS

Vitalloy Forged Socket Number	Nominal Opening	Length
CD-1214	$\frac{7}{16}$	2"
CD-1216	$\frac{1}{2}$	2"
CD-1218	$\frac{9}{16}$	2"
CD-1220	$\frac{5}{8}$	2"
CD-1222	$\frac{11}{16}$	2 $\frac{1}{2}$ "
CD-1224	$\frac{3}{4}$	2 $\frac{1}{2}$ "

CD-606 Set in Pasteboard Box.


CU-607 UNIVERSAL FLEX SET

An assortment of seven VITALLOY® FORGED Universal Flex Sockets in the "CADET" SERIES — $\frac{3}{8}$ " Square Drive. Sizes range from $\frac{3}{8}$ " to $\frac{3}{4}$ " openings. Each has the Lock-on feature permitting safe application to all types of work in hard-to-get-at places. These Flex Sockets are a necessity in any experienced mechanics tool box. They're a really fine tool both in workmanship, efficiency and appearance. There's a heavy chrome plate on each. See Page 29 for Handles and Parts.

CU-607 UNIVERSAL FLEX SET
CONTENTS:
12 POINT, DOUBLE HEX FLEX SOCKETS

Vitalloy Forged Socket Number	Nominal Opening	Length
CU-1212	$\frac{3}{8}$	1 $\frac{1}{2}$ "
CU-1214	$\frac{7}{16}$	1 $\frac{9}{16}$ "
CU-1216	$\frac{1}{2}$	1 $\frac{19}{32}$ "
CU-1218	$\frac{9}{16}$	1 $\frac{5}{8}$ "
CU-1220	$\frac{5}{8}$	1 $\frac{3}{4}$ "
CU-1222	$\frac{11}{16}$	1 $\frac{25}{32}$ "
CU-1224	$\frac{3}{4}$	1 $\frac{13}{16}$ "

Set CU-607 in Pasteboard Box.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

® Trade Mark Registered

BILLINGS VITALLOY® FORGED SOCKETS

"CADET" SERIES — 3/8" SQUARE DRIVE

3/8" sq. dr. **SOCKET SETS**

"CADET" SERIES

C-608 DETACHABLE SOCKET SET

CONTENTS:

12 POINT, DOUBLE HEX
SOCKETS

Vitalloy Forged Socket No.	Nominal Opening	HANDLE PARTS
C-1212	3/8	C-118 Flex Handle — 8 1/4" with knurled handle.
C-1214	7/16	
C-1216	1/2	
C-1218	9/16	
C-1220	5/8	
C-1222	11/16	C-608 — Tool Box Size: 9 1/4 x 2 7/8 x 1 3/8".
C-1224	3/4	

C-608 Set in Metal Tool Box or Pasteboard Box.



C-608 DETACHABLE SOCKET SET

A set of seven BILLINGS VITALLOY® FORGED thin, straight wall sockets — "CADET" Series — with one 8 1/4" Flex Handle with knurled grip complete in either Metal Tool Box or Pasteboard Box. A popular set for general use.

For additional Socket Parts see Page 29.

BILLINGS' "CADET" SERIES VITALLOY® FORGED SOCKETS

The "CADET" Series of BILLINGS VITALLOY® FORGED Sockets are hot forged from selected alloy steel and, in every respect, are quality sockets. The forging process produces a smooth, clean-cut opening, accurately shaped and with extra depth. The side walls are thin and straight. The "CADET" Series Sockets have a heavy chrome plate finish.

The "CADET" Series Handles and assorted Attachments (see Page 29) are designed to cover a wide range of daily use among workers on automobile and airplane motors, refrigerators, radios and electrical devices. The socket parts are light in weight and designed with proper balance and "feel". The "CADET" Series socket parts have a heavy chrome plate finish.

C-610 DETACHABLE SOCKET SET

CONTENTS:

12 POINT, DOUBLE HEX
SOCKETS

Vitalloy Forged Socket No.	Nominal Opening	HANDLE PARTS
C-1212	3/8	*C-147 Reversible Ratchet — 7" long with Knurled Handle.
C-1214	7/16	
C-1216	1/2	C-118 Flex Handle — 8" long with Knurled Handle.
C-1218	9/16	
C-1220	5/8	C-133 Extension Bar — 3" long.
C-1222	11/16	
C-1224	3/4	

* Can be furnished with C-157 Ratchet with Plug Connector at reduction in list price.

C-610 Set, in Metal Tool Box with C-147 Reversible Ratchet.

C-610 Set, in Pasteboard Box with C-147 Reversible Ratchet.

C-610 — Tool Box Size: 9 1/4 x 2 7/8 x 1 3/8".

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.



C-610 DETACHABLE SOCKET SET

An ideal selection of BILLINGS' "CADET" Series VITALLOY® FORGED, thin, straight wall sockets and attachments upon which to build your tool set of the future. The utmost in utility at minimum cost.

"CADET" SERIES
BILLINGS VITALLOY® FORGED SOCKETS
"CADET" SERIES — $\frac{3}{8}$ " SQUARE DRIVE

C-615 DETACHABLE SOCKET SET

The mechanics' favorite set — Designed for aviation, automotive, air conditioning, oil burner, refrigeration industries — Contains seven VITALLOY® FORGED Sockets and eight attachments.

C-615 DETACHABLE SOCKET SET
CONTENTS:
12 POINT, DOUBLE HEX SOCKETS

Vitalloy Forged Socket No.	Nominal Opening
C-1212	3/8
C-1214	7/16
C-1216	1/2
C-1218	9/16
C-1220	5/8
C-1222	11/16
C-1224	3/4

* Can be furnished with Ratchet C-157 with Plug Connector at reduction in list price.

C-615 Set, Complete with Tool Box and Reversible Ratchet C-147.

C-615 — Tool Box Size: 17 1/2 x 6 1/2 x 1 1/4".

HANDLE PARTS

C-1017 Speeder — 17" long with Knurled Revolving Grip.

C-128 Sliding "T" Handle — 8" long.

C-180 Universal Joint.

C-135 Extension Bar — 5 1/2" long.

C-1312 Extension Bar — 12" long.

*C-147 Reversible Ratchet — 7" long with Knurled Handle.

C-118 Flex Handle — 8 1/4" long with Knurled Handle

CB-110 Flex Handle Bar — 6 1/2" long.


C-625 DETACHABLE SOCKET SET
C-625 DETACHABLE SOCKET SET

General Utility Set — a selected assortment of 25 pieces, "CADET" Series of VITALLOY® FORGED Sockets, Handles and Attachments providing an extensive range of service on a large variety of small size nuts. Used by workers on motor, refrigerator, radio and electrical device repair and service. All sockets and parts in their own compartments in a strong, metal tool box making it easy for mechanics to find the tool required at a glance.

C-625 DETACHABLE SOCKET SET CONTENTS

12 Pt., DOUBLE HEX SOCKETS		12 Pt., DOUBLE HEX EXTRA DEEP SOCKETS			12 Pt., DOUBLE HEX FLEX SOCKETS		HANDLES AND PARTS	
Vitalloy Forged Socket Number	Nominal Opening	Vitalloy Forged Socket Number	Nominal Opening	Length	Vitalloy Forged Socket Number	Nominal Opening		
C-1212	3/8						C-1017 Speeder — 17" long with Knurled Revolving Grip.	
C-1214	7/16	CD-1214	7/16	2"	CU-1214	7/16	C-128 Sliding "T" Handle — 8" long.	
C-1216	1/2	CD-1216	1/2	2"	CU-1216	1/2	C-118 Flex Handle — 8 1/4" long with Knurled Handle.	
C-1218	9/16	CD-1218	9/16	2"	CU-1218	9/16	*C-147 Reversible Ratchet — 7" long with Knurled Handle.	
C-1220	5/8	CD-1220	5/8	2"	CU-1220	5/8	C-133 Extension Bar — 3" long.	
C-1222	11/16	CD-1222	11/16	2 1/2"			C-135 Extension Bar — 5 1/2" long	
C-1224	3/4	CD-1224	3/4	2 1/2"			C-1312 Extension Bar — 12" long.	
							C-180 Universal Joint.	
							* Can be furnished with C-157 Ratchet with Plug Connector at reduction in List Price.	
							C-625 Set, complete and C-147 Reversible Ratchet.	
							C-625 Tool Box Size: 17 1/2 x 6 1/2 x 1 1/4".	

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

BILLINGS VITALLOY® FORGED SOCKETS

"STANDARD" SERIES — 1/2" SQUARE DRIVE

1/2" sq. dr. **SOCKETS**

"STANDARD" SERIES

BILLINGS' VITALLOY® FORGED Sockets embody the design, workmanship, and all the engineered features demanded by experienced users.

BILLINGS' FEATURES: (1) Extra thin. (2) Straight sidewalls. (3) Teeth clear cut and accurately formed. (4) Inside base of socket clean and smooth. (5) Lock-on feature — sockets locked to handles yet readily released. (6) Hot forged from selected alloy steel. (7) Heat treatment scientifically controlled. (8) A pleasing heavy chrome plate finish. (9) Sockets clearly stamped with

class number, size opening and trade mark "BILLINGS' VITALLOY®". (10) Rigid inspection of every single socket before packaging to guard and maintain the Billings' high standards of quality and accuracy.

BILLINGS' VITALLOY® FORGED Sockets are compact in design with correctly proportioned socket depth and height in relation to the many size openings, resulting in Detachable Sockets nicely balanced, of greater strength and longer lasting qualities for rapid daily applications.

FINISH — HEAVY CHROME PLATE

DOUBLE HEX — 12 POINT

Vitalloy Forged Socket No.	Nominal Opening	Amer. Std. Heavy Nut (USS) Size Bolts	Amer. Std. Hex Head Cap Screws Dia. Screws	Amer. Std. Light Nut (SAE) Size Bolts	Amer. Std. Reg. Nut Size Bolts	Length (App.)	Vitalloy Forged Socket No.
S-1214	7/16	—	1/4	1/4	1/4, †12	1 1/4	S-1214
S-1216	1/2	1/4	5/16	5/16	—	1 9/32	S-1216
S-1218	9/16	—	3/8	3/8	5/16	1 5/16	S-1218
S-1219	19/32	5/16	—	—	—	1 11/32	S-1219
S-1220	5/8	—	7/16	7/16	3/8	1 3/8	S-1220
S-1222	11/16	3/8	—	—	—	1 7/16	S-1222
S-1224	3/4	—	1/2	1/2	7/16	1 15/32	S-1224
S-1225	25/32	7/16	—	—	—	1 1/2	S-1225
S-1226	13/16	—	9/16	—	1/2	1 9/16	S-1226
S-1228	7/8	1/2	5/8	9/16	9/16	1 5/8	S-1228
S-1230	15/16	9/16	—	5/8	—	1 41/64	S-1230
S-1232	1	—	3/4	—	5/8	1 11/16	S-1232
S-1234	1 1/16	5/8	—	3/4	—	1 3/4	S-1234
S-1236	1 1/8	—	7/8	—	3/4	1 13/16	S-1236
S-1240	1 1/4	3/4	*1	7/8	—	1 15/16	S-1240



VITALLOY® FORGED
12 POINT
DOUBLE HEX



VITALLOY® FORGED
12 POINT
DOUBLE HEX
DEEP WALL

FINISH — HEAVY CHROME PLATE

DOUBLE HEX — DEEP WALL — 12 PT.

Vitalloy Forged Socket No.	Nominal Opening	Amer. Std. Heavy Nut (USS) Size Bolts	Amer. Std. Hex Head Cap Screws Dia. Screws	Amer. Std. Light Nut (SAE) Size Bolts	Amer. Std. Reg. Nut Size Bolts	Length (App.)	Vitalloy Forged Socket No.
SD-1216	1/2	1/4	5/16	5/16	—	3	SD-1216
SD-1218	9/16	—	3/8	3/8	5/16	3	SD-1218
SD-1220	5/8	—	7/16	7/16	3/8	3	SD-1220
SD-1222	11/16	3/8	—	—	—	3	SD-1222
SD-1224	3/4	—	1/2	1/2	7/16	3	SD-1224
SD-1226	13/16	—	9/16	—	1/2	3	SD-1226
SD-1228	7/8	1/2	5/8	9/16	9/16	3 1/4	SD-1228
SD-1230	15/16	9/16	—	5/8	—	3 1/4	SD-1230
SD-1232	1	—	3/4	—	5/8	3 1/4	SD-1232
SD-1236	1 1/8	—	7/8	—	3/4	3 1/4	SD-1236

FINISH — HEAVY CHROME PLATE

DOUBLE SQUARE — 8 POINT

Vitalloy Forged Socket No.	Nominal Opening	Amer. Std. Heavy Nut (USS) Size Bolts	Amer. Std. Hex Head Cap Screws Dia. Screws	Set Screw Size	Amer. Std. Reg. Nut Size Bolts	Length (App.)	Socket Forged Vitalloy No.
S-814	7/16	—	—	7/16	1/4	1 5/32	S-814
S-816	1/2	1/4	—	1/2	—	1 3/16	S-816
S-818	9/16	—	—	9/16	5/16	1 7/32	S-818
S-820	5/8	—	—	5/8	3/8	1 5/16	S-820
S-824	3/4	—	—	3/4	7/16	1 7/16	S-824

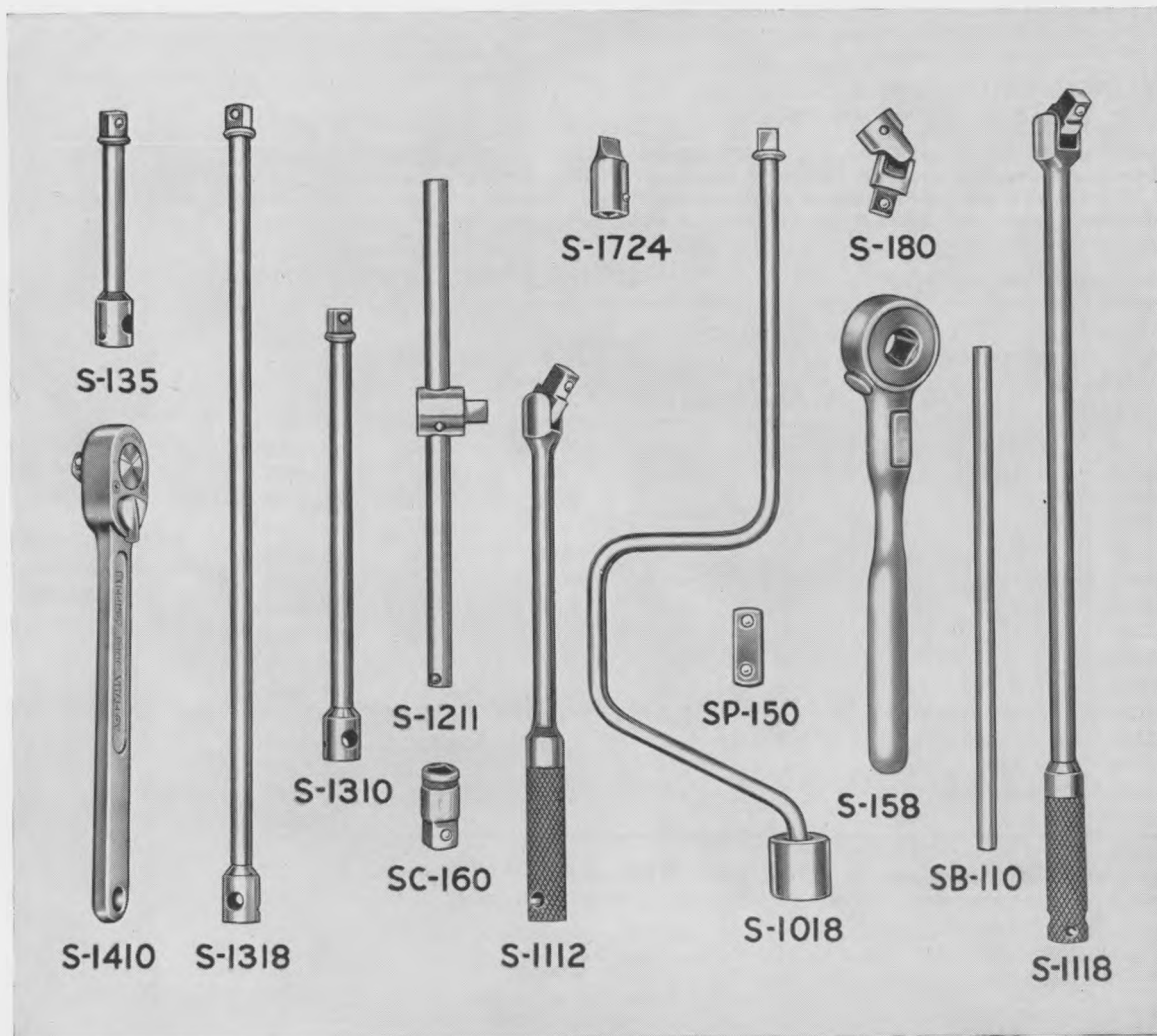


VITALLOY® FORGED
8 POINT
DOUBLE SQUARE

†For American Standard Machine Screw and Stove Bolt Nuts.

*Old Style Cap Screws — Now Obsolete.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

"STANDARD" SERIES

**VITALLOY® FORGED DETACHABLE SOCKET PARTS
"STANDARD" SERIES — 1/2" SQUARE DRIVE**

Vitalloy Forged Parts No.	Description
S-1410	Reversible Ratchet — 10 1/4" Long
S-158	Ratchet 8 1/2" Long, Complete with SP-150 Plug Conn.
SP-150	Ratchet Plug Connector
S-1018	Speeder — 18" Long with Revolving Grip
S-1112	Flex Handle — 12" Long with Knurled Handle
S-1118	Flex Handle — 18" Long with Knurled Handle
SB-110	Flex Handle Bar — 11" Long
S-1211	Sliding T Handle — 11" Long
S-135	Extension — 5" Long
S-1310	Extension — 10" Long
S-1318	Extension — 18" Long
S-180	Universal Joint
S-1724	3/4" Drag Link Socket
S-1730	15/16" Drag Link Socket
SC-160	Adapter 1/2" to 3/8" Reduce — Adapts 1/2" Square Drive Handles and Parts to 3/8" Square Drive Sockets

BILLINGS' VITALLOY® FORGED Socket Parts are drop forged from selected alloy steel, scientifically heat treated, hardened and tempered for long wearing qualities. The heavy chrome finish gives protection plus a pleasing appearance. Each engineered feature is designed to increase the efficiency, speed and improve the handling and balance of each part. Combining parts get at the tough jobs easily. The lock-on feature holds Sockets to Parts yet permits easy release. The "STANDARD" SERIES — 1/2" Sq. Dr. — are the everyday "must" for all mechanics and wrench users.

BILLINGS VITALLOY® FORGED SOCKETS

"STANDARD" SERIES — 1/2" SQUARE DRIVE

1/2" sq. dr. **SOCKETS**

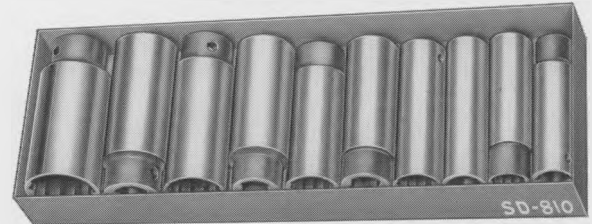
SD-810 DETACHABLE SOCKET SET

CONTENTS:

12 POINT, DOUBLE HEX, EXTRA DEEP SOCKETS

Vitalloy Forged Socket Number	Nominal Opening	Length
SD-1216	1/2	3"
SD-1218	9/16	3"
SD-1220	5/8	3"
SD-1222	11/16	3"
SD-1224	3/4	3"
SD-1226	13/16	3"
SD-1228	7/8	3 1/4"
SD-1230	15/16	3 1/4"
SD-1232	1	3 1/4"
SD-1236	1 1/8	3 1/4"

Furnished in Pasteboard Box.



SD-810 DETACHABLE SOCKET SET

— EXTRA DEEP —

An assortment of BILLINGS' VITALLOY® FORGED extra deep sockets which is a "must" where nuts are set down deeply over bolts, spring clips, on spark plugs, and for applications where standard sockets are not adaptable. In constant demand by industrial millwrights and mechanics.

S-811 DETACHABLE SOCKET SET

CONTENTS:

12 POINT, DOUBLE HEX SOCKETS

Vitalloy Forged Socket Number	Nominal Opening	HANDLE PARTS
S-1214	7/16	*S-1410 Reversible Ratchet — 10 1/2" long.
S-1216	1/2	S-135 Extension Bar — 5" long.
S-1218	9/16	S-1310 Extension Bar — 10" long.
S-1220	5/8	* Can be furnished with S-158 Ratchet with Plug Connector at reduction in list price.
S-1222	11/16	
S-1224	3/4	
S-1226	13/16	
S-1228	7/8	

S-811 Set, Complete with Metal Tool Box and S-1410 Reversible Ratchet.

S-811 — Tool Box Size: 14 7/8 x 3 x 1 7/8".



S-811 DETACHABLE SOCKET SET

Compact assortment for assembly work and for general use. Contains eight BILLINGS' VITALLOY® FORGED double hex sockets ranging from 7/16" to 7/8", an S-1410 Reversible Ratchet (see Page 39) and two extensions.

S-811A DETACHABLE SOCKET SET

CONTENTS:

12 POINT, DOUBLE HEX SOCKETS

Vitalloy Forged Socket Number	Nominal Opening	HANDLE PARTS
S-1214	7/16	S-1112 Flex Handle — 12" long with Knurled Handle.
S-1216	1/2	S-811A Set, Complete with Metal Tool Box.
S-1218	9/16	S-811A Set, in Pasteboard Box.
S-1220	5/8	S-811A — Tool Box Size: 14 7/8 x 3 x 1 7/8".
S-1222	11/16	
S-1224	3/4	
S-1226	13/16	
S-1228	7/8	
S-1230	15/16	
S-1232	1	



S-811A DETACHABLE SOCKET SET

Fine assortment of ten BILLINGS' VITALLOY® FORGED double hex sockets in sizes ranging from 7/16" to 1" and a flex handle. The adaptability of this flex handle makes it possible to get into places not accessible to wrenches.

For additional socket parts see Page 34.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

"STANDARD" SERIES
S-811-B DETACHABLE SOCKET SET
CONTENTS:
12 POINT, DOUBLE HEX SOCKETS

Vitalloy Forged Socket No.	Nominal Opening	Vitalloy Forged Socket No.	Nominal Opening
S-1214	7/16	S-1222	11/16
S-1216	1/2	S-1224	3/4
S-1218	9/16	S-1225	25/32
S-1219	19/32	S-1228	7/8
S-1220	5/8	S-1232	1

HANDLE PART

*S-1410 Reversible Ratchet.

* Can be furnished with S-158 Ratchet with Plug Connector at reduction in list price.

S-811-B Set, complete in Metal Tool Box and S-1410 Ratchet.

S-811-B — Tool Box Size: 11 1/2 x 2 1/4 x 2".

Total Net Weight: 3 lbs., 11 ozs.


S-811-B DETACHABLE SOCKET SET

A utility set containing ten VITALLOY® FORGED 12 Point, double hex Sockets in the "STANDARD" Series — 1/2" Square Drive; also one of the BILLINGS' No. S-1410 Reversible Ratchets packed complete in a sturdy, heavy gauge metal box. The No. S-1410 is explained in detail on Page 39. For additional Socket Parts see Page 34.

S-812 DETACHABLE SOCKET SET
CONTENTS:
12 POINT, DOUBLE HEX SOCKETS

Vitalloy Forged Socket No.	Nominal Opening	Vitalloy Forged Socket No.	Nominal Opening
S-1214	7/16	S-1224	3/4
S-1216	1/2	S-1225	25/32
S-1218	9/16	S-1226	13/16
S-1219	19/32	S-1228	7/8
S-1220	5/8	S-1230	15/16
S-1222	11/16	S-1232	1

S-812 Set, in Pasteboard Box.


S-812 DETACHABLE SOCKET SET

Twelve VITALLOY® FORGED 12 Point, double hex Sockets in the "STANDARD" Series — 1/2" Square Drive packaged in a pasteboard box. This assortment, with openings from 7/16" to 1", is ideal for replacements and as a start for a larger, more complete Socket Set.

For "STANDARD" SERIES — 1/2" Square Drive Socket Parts see Page 34.

BILLINGS' "STANDARD" SERIES VITALLOY® FORGED SOCKETS AND PARTS

Hot forged from selected steel producing quality Sockets with clean-cut openings, accurately shaped and with extra depth. The side walls are thin and straight. Furnished in a heavy chrome plate finish.

The "STANDARD" SERIES Handles and assorted attachments (see Page 34) are designed to make any combination desired. The Parts are lightweight, strong and properly balanced for rapid applications. Each part has a pleasing heavy chrome plate finish.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

®Trade Mark Registered

BILLINGS VITALLOY® FORGED SOCKETS

"STANDARD" SERIES — 1/2" SQUARE DRIVE

1/2" sq. dr. **SOCKET SETS**

"STANDARD" SERIES

S-813 DETACHABLE SOCKET SET

CONTENTS:

12 POINT, DOUBLE HEX SOCKETS

Vitalloy Forged Socket Number	Nominal Opening	HANDLE PARTS
S-1214	7/16	S-1112 Flex Handle — 12" long with Knurled Handle.
S-1216	1/2	
S-1218	9/16	S-135 Extension Bar — 5" long.
S-1220	5/8	
S-1222	11/16	*S-1410 Reversible Ratchet — 10 1/2" long.
S-1224	3/4	
S-1226	13/16	* Can be furnished with S-158 Ratchet and Plug Connector at reduction in list price.
S-1228	7/8	
S-1230	15/16	
S-1232	1	

S-813 Set, Complete with Metal Tool Box with S-1410 Ratchet.

S-813 Set, in Pasteboard Box with S-1410 Ratchet.

S-813 — Tool Box Size: 14 7/8 x 3 x 1 7/8".



S-813 DETACHABLE SOCKET SET

General purpose set for home owners and mechanics containing ten VITALLOY® FORGED double hex Sockets, Flex Handle and the Billings' No. S-1410 Reversible Ratchet (see Page 39). The Sockets are the most used sizes ranging from 7/16" to 1" in the popular "STANDARD" Series — 1/2" Square Drive. Strong enamel metal tool box has separate section for sockets and for parts.

S-816 DETACHABLE SOCKET SET

CONTENTS:

12 POINT, DOUBLE HEX SOCKETS

Vitalloy Forged Socket Number	Nominal Opening	HANDLE PARTS
S-1214	7/16	*S-1410 Reversible Ratchet — 10 1/2" long.
S-1216	1/2	
S-1218	9/16	S-1211 Sliding "T" Handle.
S-1219	19/32	
S-1220	5/8	S-180 Universal Joint.
S-1222	11/16	
S-1224	3/4	S-1310 Extension Bar — 10" long.
S-1225	25/32	
S-1226	13/16	* Can be furnished with S-158 Ratchet and Plug Connector at reduction in list price.
S-1228	7/8	
S-1230	15/16	
S-1232	1	

S-816 Set, Complete with Metal Tool Box with S-1410 Reversible Ratchet.

S-816 — Tool Box Size: 14 7/8 x 3 x 1 7/8".



S-816 DETACHABLE SOCKET SET

Here's a basic set upon which to develop a more complete set for a greater variety of applications. There are twelve sizes of VITALLOY® FORGED double hex Sockets and four very useful parts including the Billings' No. S-1410 Reversible Ratchet. Additional parts for the Billings' VITALLOY® FORGED Socket Sets shown are described on Page 34.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

"STANDARD" SERIES

S-824 DETACHABLE SOCKET SET

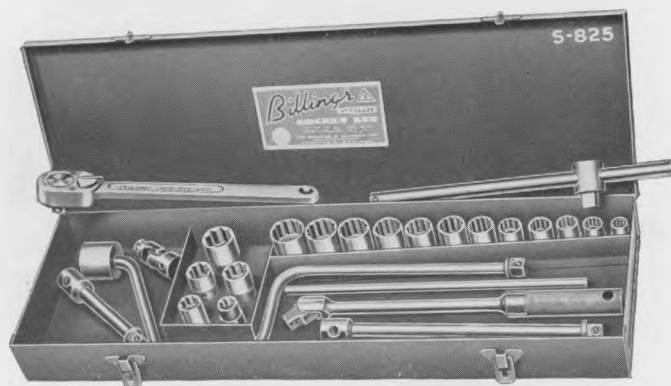
An efficiently selected assortment of BILLINGS' VITALLOY® FORGED double hex Sockets in sizes from 7/16" to 1" openings, and in the extra deep wall Sockets from 7/16" to 3/4". This set is popular with mechanics in all types of industries including shipbuilding and the oil fields because of the fine selection of Handles and Parts. All "STANDARD" Series Sockets and Parts have an attractive, heavy chrome plate finish.

S-824 Set, Complete with Metal Tool Box and Reversible Ratchet S-1410.

S-824 — Tool Box Size: 21 1/2 x 6 5/8 x 2".

S-824 DETACHABLE SOCKET SET CONTENTS

12 POINT, DOUBLE HEX SOCKETS				12 POINT, DOUBLE HEX EXTRA DEEP SOCKETS			HANDLE PARTS	
Vitalloy Forged Socket Number	Nominal Opening	Vitalloy Forged Socket Number	Nominal Opening	Vitalloy Forged Socket Number	Nominal Opening	Length		
S-1214	7/16	S-1224	3/4				S-1018 Speeder — 18" long with Revolving Grip.	
S-1216	1/2	S-1225	25/32	SD-1222	11/16	3"	S-1211 Sliding "T" Handle — 11" long.	
S-1218	9/16	S-1226	13/16	SD-1226	13/16	3"	S-135 Extension Bar — 5" long.	
S-1219	19/32	S-1228	7/8	SD-1228	7/8	3 1/4"	S-1310 Extension Bar — 10" long.	
S-1220	5/8	S-1230	15/16	SD-1230	15/16	3 1/4"	S-180 Universal Joint.	
S-1222	11/16	S-1232	1				*S-1410 Reversible Ratchet — 10 1/2" long.	
							S-1112 Flex Handle — 12" long with Knurled Handle.	
							SB-110 Flex Handle Bar.	
							*Can be furnished with Ratchet S-158 with Plug Connector at reduction of \$2.80 in list price.	


S-825 DETACHABLE SOCKET SET

A real utility set containing twelve BILLINGS' VITALLOY® FORGED double hex, 12 point Sockets in the "STANDARD" Series with openings from 7/16" to 1": five BILLINGS' VITALLOY® FORGED double square, 8 point Sockets and eight very practical Handles and Parts. For additional Parts see Page 34. The metal tool box is partitioned for the Sockets and for the Handles and has two snap fasteners on the cover.

S-825 Set, Complete with Metal Tool Box and Reversible Ratchet S-1410.

S-825 — Tool Box Size: 21 1/2 x 6 5/8 x 2".

S-825 DETACHABLE SOCKET SET CONTENTS

12 POINT, DOUBLE HEX SOCKETS				8 POINT, DOUBLE SQUARE SOCKETS		HANDLE PARTS	
Vitalloy Forged Socket Number	Nominal Opening	Vitalloy Forged Socket Number	Nominal Opening	Vitalloy Forged Socket Number	Nominal Opening		
S-1214	7/16	S-1224	3/4	S-814	7/16	S-1018 Speeder — 18" long with Revolving Grip.	
S-1216	1/2	S-1225	25/32	S-816	1/2	S-1211 Sliding "T" Handle — 11" long.	
S-1218	9/16	S-1226	13/16	S-818	9/16	S-135 Extension Bar — 5" long.	
S-1219	19/32	S-1228	7/8	S-820	5/8	S-1310 Extension Bar — 10" long.	
S-1220	5/8	S-1230	15/16	S-824	3/4	S-180 Universal Joint.	
S-1222	11/16	S-1232	1			*S-1410 Reversible Ratchet — 10 1/2" long.	
						S-1112 Flex Handle — 12" long with Knurled Handle.	
						SB-110 Flex Handle Bar.	
						* Can be furnished with S-158 Ratchet with Plug Connector at reduction in list price.	

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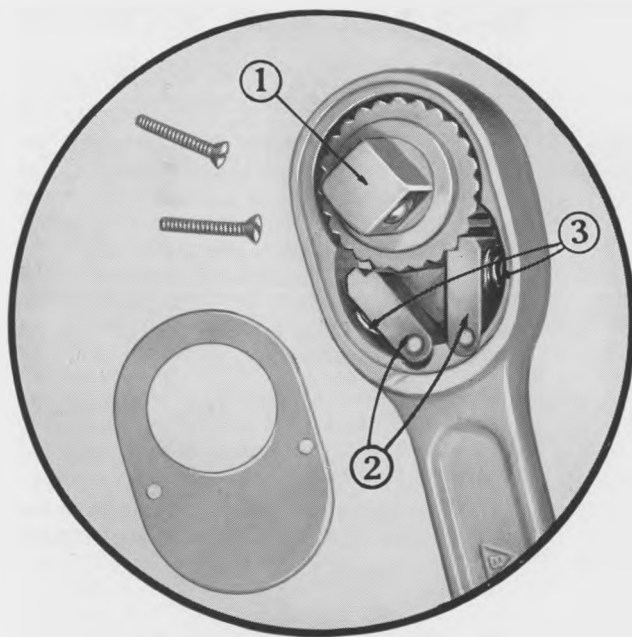
For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

NEW STREAMLINED VITALLOY® RATCHET

REVERSIBLE RATCHET

1/2" SQUARE DRIVE

WITH *Only 3 Working Parts*



WORKING PARTS . . .

- 1 - RATCHET WHEEL
- 2 - PAWLS
- 3 - SPRINGS

Other Parts —
Cover and Screws,
Handle, Cam and
Shifter Lever.

NO. S-1410 1/2" Square Drive

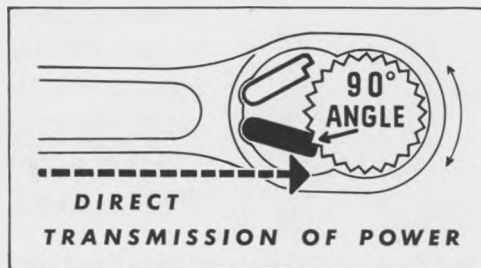
Simplicity of design combined with ruggedness and power are the outstanding features of the Billings No. S-1410 - 1/2" Square Drive Reversible Ratchet. Its working parts are enclosed in a solid forged head with a watch cover fit protecting the parts from dirt, dust, grit, etc.

Tests have proven that the Billings safety factor will allow No. S-1410 to pull in excess of the 4800 inch pounds required by U. S. Gov. Spec. No. 41-W-10 (INT). This does not have any effect on the simple operating mechanism.

No. S-1410 is one of the lightest reversible ratchets on the market — Scientifically designed to give maximum working efficiency with only 18 oz. of weight. Length overall 10 inches. The handle fits the hand of the average user. The shifter lever, which reverses ratchet direction, is thumb size — no broken finger nails.

A minimum of working or moving parts eliminates slipping, skidding and jamming. The user's effort is transmitted directly to the driver. Each ratchet is individually proof tested and inspected before packaging.

Billings Ratchet Pawl meets the tooth of the Ratchet Wheel at a 90° angle — DIRECT TRANSMISSION of POWER!



BILLINGS' VITALLOY® FORGED SOCKET SETS containing No. S-1410 REVERSIBLE RATCHET are shown on Pages 35-38 inc. and 40.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

BILLINGS

VITALLOY
Trade Mark Registered

WRENCHES

BILLINGS VITALLOY® FORGED SOCKETS **"STANDARD" SERIES — 1/2" SQUARE DRIVE** **"HEAVY DUTY" SERIES — 3/4" SQUARE DRIVE**

"STANDARD" AND "HEAVY DUTY" SERIES



SH-32 DETACHABLE SOCKET SET

A very practical combination of BILLINGS' "STANDARD" (1/2" Sq. Dr.) and "HEAVY DUTY" (3/4" Sq. Dr.) SERIES VITALLOY® FORGED Sockets and Handle attachments for Millwrights, tractor and truck mechanics, and artisans of all kinds. The set contains a selection of popular sizes — twelve BILLINGS' VITALLOY® FORGED 12 Point, Double Hex 1/2" Square Drive Sockets; eight 1/2" Handle attachments and eleven BILLINGS' VITALLOY® FORGED 12 Point, Double Hex 3/4" Square Drive Sockets and six 3/4" Handle attachments.

The heavy gauge metal tool box has a partition in the base for Sockets and Attachments (3/4" size) and in the separate tray there is space for the 1/2" Sockets and Handle attachments.

For additional attachments see Page 34 in the "STANDARD" Series and Page 41 in the "HEAVY DUTY" Series.

SH-32 DETACHABLE SOCKET SET

CONTENTS:

"STANDARD" SERIES — 1/2" SQ. DR.

12 POINT, DOUBLE HEX SOCKETS

Socket Number	Nominal Opening	Socket Number	Nominal Opening
S-1214	7/16	S-1224	3/4
S-1216	1/2	S-1225	25/32
S-1218	9/16	S-1226	13/16
S-1219	19/32	S-1228	7/8
S-1220	5/8	S-1230	15/16
S-1222	11/16	S-1232	1

"HEAVY DUTY" SERIES — 3/4" SQ. DR.

12 POINT, DOUBLE HEX SOCKETS

Socket Number	Nominal Opening	Socket Number	Nominal Opening
H-1234	1 1/16	H-1252	1 5/8
H-1236	1 1/8	H-1254	1 11/16
H-1240	1 1/4	H-1258	1 13/16
H-1242	1 5/16	H-1260	1 7/8
H-1246	1 7/16	H-1264	2
H-1248	1 1/2		

"STANDARD" SERIES — 1/2" SQ. DR.

HANDLE PARTS

- *S-1410 Reversible Ratchet — 10 1/2" long.
- S-1018 Speeder with revolving grip — 18" long.
- S-1211 Sliding "T" Handle — 11" long.
- S-135 Extension Bar — 5" long.
- S-1310 Extension Bar — 10" long.
- S-1118 Flex Handle — 18" long.
- SB-110 Flex Handle Bar — 11" long.
- S-180 Universal Joint.
- * Can be furnished with S-158 Ratchet and Plug Connector at reduction in list price.

"HEAVY DUTY" SERIES — 3/4" SQ. DR.

HANDLE PARTS

- H-1421 Reversible Ratchet — 21" long with Knurled Handle.
- H-1220 Sliding "T" Handle — 20" long.
- H-138 Extension Bar — 8" long.
- H-1316 Extension Bar — 16" long.
- H-1121 Flex Handle — 21" long.
- HB-110 Flex Handle Bar — 20" long.
- SH-32 Set, Complete with Metal Tool Box and S-1410 Reversible Ratchet.
- SH-32 — Tool Box Size: 22 7/8 x 7 3/4 x 5 1/2".

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

® Trade Mark Registered

BILLINGS VITALLOY® FORGED SOCKETS

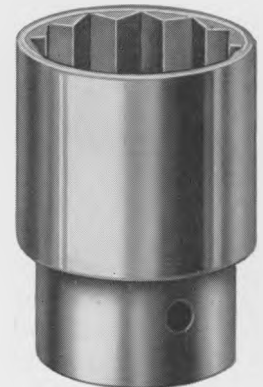
"HEAVY DUTY" SERIES—3/4" SQUARE DRIVE

Extra strong and safe for the rugged, heavy duty jobs. BILLINGS' FEATURES: Hot-forged from selected alloy steel — heat treatment scientifically controlled — thin straight walls — teeth cleanly cut — inside socket base smooth and clean — lock-on safety feature — heavy chrome finish — class number, size and trade mark "BILLINGS' VITALLOY®" stamped on each Socket — each size in the "HEAVY DUTY" SERIES is scientifically designed for proportion, balance and brute strength.

FINISH — HEAVY CHROME PLATE

Vitalloy Forged Socket No.	Nominal Opening	Amer. Std. Heavy Nut (USS) Size Bolts	Amer. Std. Hex Head Cap Screw Dia. Screws	Amer. Std. Light Nut (SAE) Size Bolts	Amer. Std. Reg. Nut Size Bolts	Length (App.)	Vitalloy Forged Socket No.
H-1234	1 1/16	5/8	—	3/4	—	2 1/16	H-1234
H-1236	1 1/8	—	7/8	—	3/4	2 1/8	H-1236
H-1238	1 3/16	—	—	—	—	2 1/8	H-1238
H-1240	1 1/4	3/4	*1	7/8	—	2 3/16	H-1240
H-1242	1 5/16	—	1	—	7/8	2 3/16	H-1242
H-1244	1 3/8	—	*1 1/8	—	—	2 3/16	H-1244
H-1246	1 7/16	7/8	—	1	—	2 1/4	H-1246
H-1248	1 1/2	—	*1 1/4 & 1 1/8	—	1	2 5/16	H-1248
H-1250	1 9/16	—	—	—	—	2 5/16	H-1250
H-1252	1 5/8	1	—	1 1/8	—	2 3/8	H-1252
H-1254	1 11/16	—	1 1/4	—	1 1/8	2 7/16	H-1254
H-1256	1 3/4	—	—	—	—	2 1/2	H-1256
H-1258	1 13/16	1 1/8	—	1 1/4	—	2 13/16	H-1258
H-1260	1 7/8	—	—	—	1 1/4	2 7/8	H-1260
H-1264	2	1 1/4	—	1 3/8	—	3	H-1264

* Old Style Cap Screw — Now Obsolete.



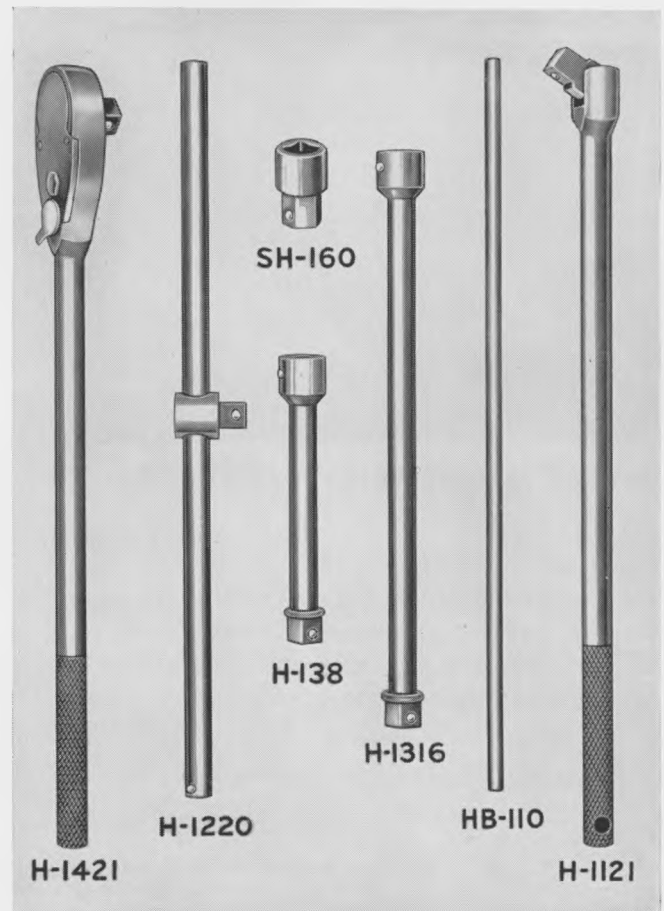
**VITALLOY® FORGED
12 POINT
DOUBLE HEX**

BILLINGS VITALLOY® FORGED SOCKET PARTS "HEAVY DUTY" SERIES 3/4" SQUARE DRIVE

Drop forged from selected steel, heat treated, heavy chrome plate finish. Every part designed and engineered for heavy duty work yet with the fine balance and "feel" desired by every experienced mechanic.

Vitalloy Forged Parts No.	Description
H-1421	Reversible Ratchet 21" Long with Knurled Handle
H-1121	Flex Handle 21" Long with Knurled Handle
HB-110	Flex Handle Bar 20" Long
H-1220	Sliding T Handle — 20" Long
H-138	Extension — 8" Long
H-1316	Extension — 16" Long
SH-160	Adapter — 1/2" to 3/4" Increase — Adapts 1/2" Square Drive Handles and Parts to 3/4" Square Drive Sockets

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.



BILLINGS VITALLOY® FORGED SOCKETS **"HEAVY DUTY" SERIES — 3/4" SQUARE DRIVE**

HEAVY DUTY SERIES



H-1212 DETACHABLE SOCKET SET

A Billings Forged Vitalloy Heavy Duty set selected for work by mechanics on trucks, busses, tractors, in fleet owners' shops and garages, and for industrial purposes. Contains eleven Billings 3/4" Square Drive Vitalloy Forged 12-point double hex sockets and a flex handle.

H-1212 DETACHABLE SOCKET SET

CONTENTS:

12 POINT, DOUBLE HEX 3/4" SQ. DR. SOCKETS

Vitalloy Forged Socket No.	Nominal Opening	Vitalloy Forged Socket No.	Nominal Opening
H-1234	1 1/16	H-1252	1 5/8
H-1236	1 1/8	H-1254	1 11/16
H-1240	1 1/4	H-1258	1 13/16
H-1242	1 5/16	H-1260	1 7/8
H-1246	1 7/16	H-1264	2
H-1248	1 1/2		

HANDLE PARTS

H-1121 Flex Handle — 21" long with Knurled Handle.

H-1212 Set, Complete with Tool Box.

H-1212 — Tool Box Size: 22 7/8 x 3 1/2 x 3 1/8".

HEAVY DUTY SERIES



H-1217 DETACHABLE SOCKET SET

A rugged Heavy Duty set of Billings Forged Vitalloy sockets and attachments selected to give the truck, bus and tractor mechanics and industrial millwrights a more completely rounded out assortment. A complete set — contains eleven Billings 3/4" square drive Forged Vitalloy 12-point double hex sockets and six handle attachments.

H-1217 DETACHABLE SOCKET SET

CONTENTS:

12 POINT, DOUBLE HEX 3/4" SQ. DR. SOCKETS

Vitalloy Forged Socket No.	Nominal Opening	Vitalloy Forged Socket No.	Nominal Opening
H-1234	1 1/16	H-1252	1 5/8
H-1236	1 1/8	H-1254	1 11/16
H-1240	1 1/4	H-1258	1 13/16
H-1242	1 5/16	H-1260	1 7/8
H-1246	1 7/16	H-1264	2
H-1248	1 1/2		

HANDLE PARTS

H-1421 Reversible Ratchet — 21" long with Knurled Handle.

H-1220 Sliding "T" Handle — 20" long.

H-1121 Flex Handle — 21" long with Knurled Handle.

HB-110 Flex Handle Bar — 20" long.

H-138 Extension — 8" long.

H-1316 Extension — 16" long.

H-1217 Set, Complete with Tool Box.

H-1217 — Tool Box Size: 22 7/8 x 7 3/4 x 3 1/2".

® Trade Mark Registered

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.



BILLINGS*Triple Safety
Features*

1. Safety eye construction — tight fitting handles.
2. Magnaflux* inspection — sound, perfect heads.
3. Rockwell testing — controlled hardness.

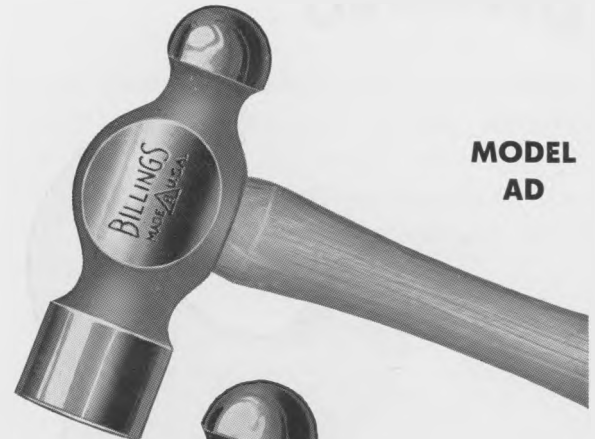
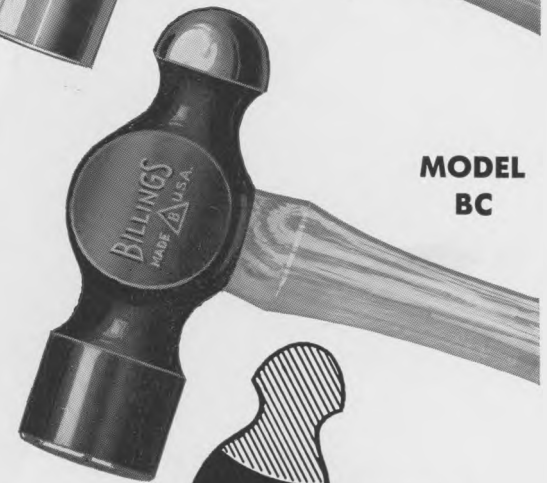
MODEL AD

Heads forged of BILLINGS' special analysis alloy steel held within specified hardness limits and full polished. Handles of carefully selected second growth hickory, thoroughly waxed.

MODEL BC

Heads also forged of special analysis alloy steel, brightened face and pein only. Handles of selected, second growth hickory, waxed.

* Magnaflux Inspection — One of the best methods in which the part necessarily ferro-magnetic is magnetized and covered with a fine magnetic powder. The presence of a crack is indicated by a disturbance of the magnetic flux and the gathering of the magnetic powder at the spot. BILLINGS' VITALLOY® FORGED HAMMERS are "Magnaflux Inspected"!

**MODEL
AD****MODEL
BC****SAFETY
EYE
CONSTRUCTION****MODEL AD†****MODEL BC†****Polished Head****Black, Bright Face and Pein**

Number	Weight Oz.	Number	Weight Oz.
5/0	4	5/0	4
3/0	8	3/0	8
2/0	12	2/0	12
0	16	0	16
1	20	1	20
2	24	2	24
4	32	4	32
6	40	6	40

† PLEASE SPECIFY MODEL; unless specified, Model BC will be furnished. 4 oz. to 24 oz. inclusive packed 6 in a Box; balance 2 in a Box.

**BILLINGS SAFETY EYE
CONSTRUCTION**

The Billings Safety Eye Construction, illustrated, shows the convex shape of the Billings' Hammer Eye. Thus, the end portion of the handle is actually reduced in size in being driven through the Safety Eye forming a wedge of itself. It is additionally secured by both wood and metal wedges driven at right angles to each other.

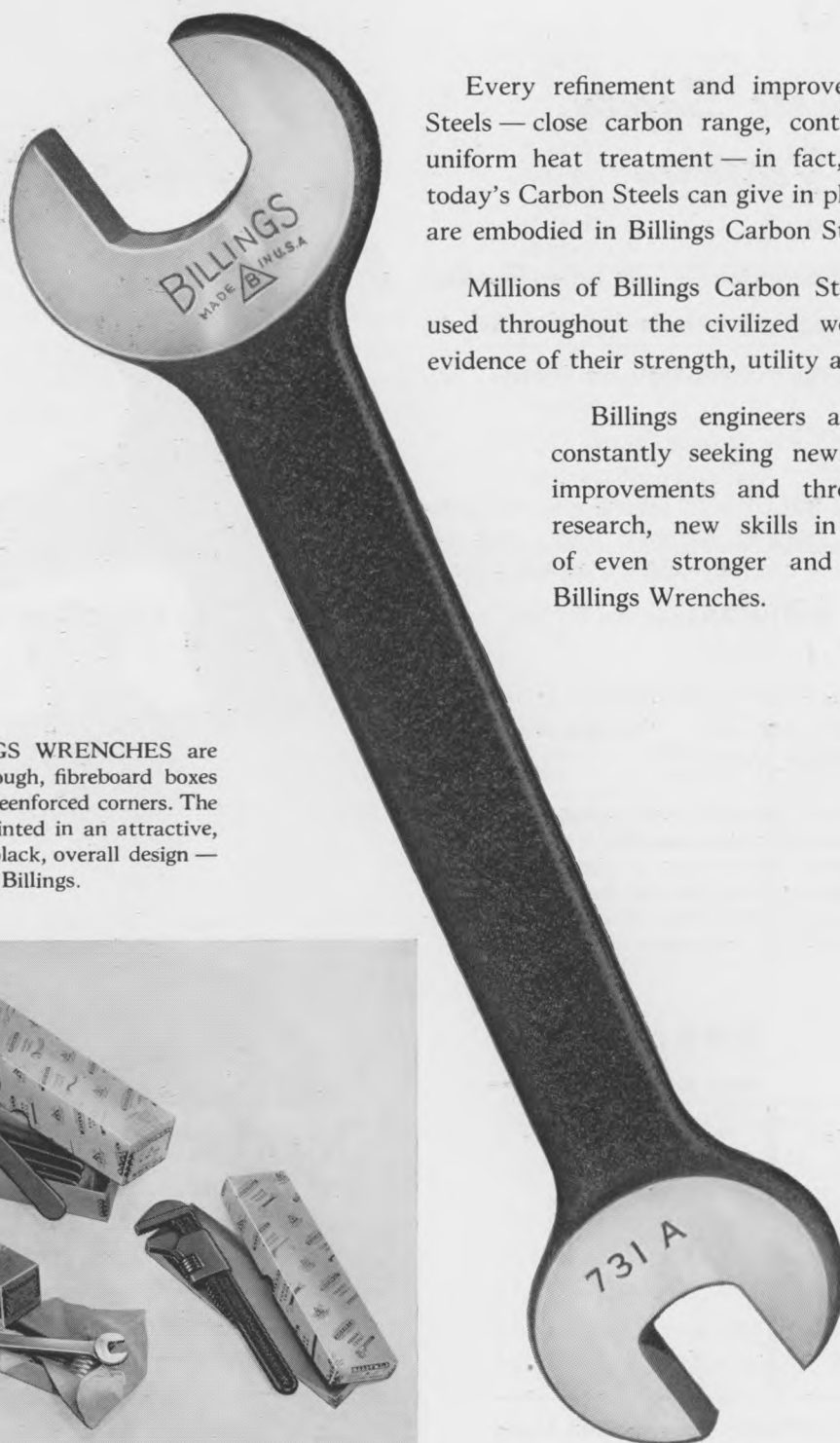
For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

BILLINGS**VITALLOY STEEL HAMMERS**

Trade Mark Registered

BILLINGS

CARBON STEEL WRENCHES



Every refinement and improvement in Carbon Steels — close carbon range, controlled grain size, uniform heat treatment — in fact, everything that today's Carbon Steels can give in physical properties, are embodied in Billings Carbon Steel Wrenches.

Millions of Billings Carbon Steel Wrenches are used throughout the civilized world — convincing evidence of their strength, utility and their long life.

Billings engineers and designers are constantly seeking new methods, design improvements and through metalurgical research, new skills in the development of even stronger and more servicable Billings Wrenches.

BILLINGS WRENCHES are packed in tough, fibreboard boxes with metal reenforced corners. The boxes are printed in an attractive, yellow and black, overall design — distinctively Billings.

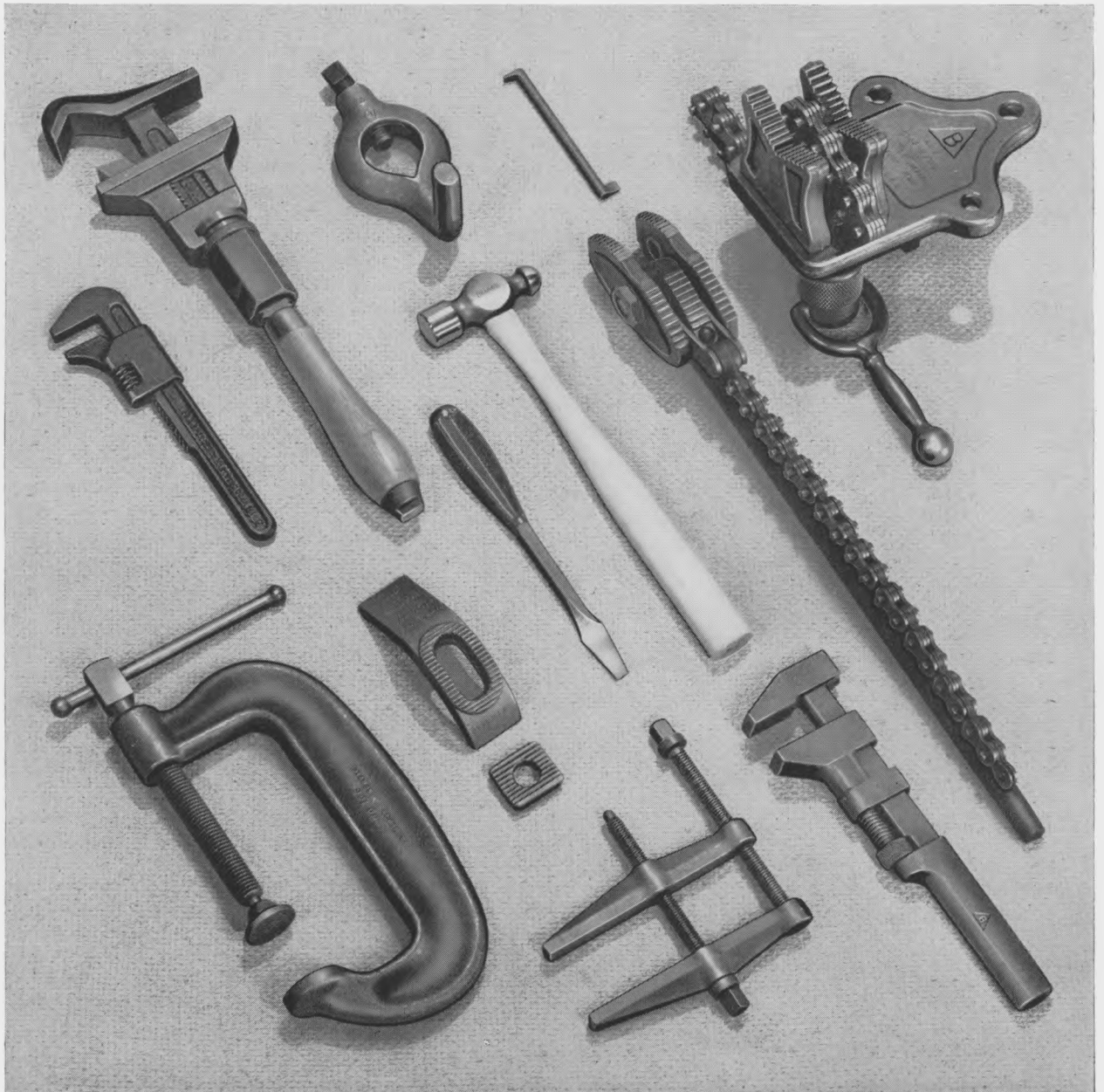


For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.



CARBON STEEL SHOP TOOLS

Workmen in industrial plants, in garages and machine shops, plumbers, heating contractors, electricians and oil well operators are using Billings Shop Tools because (1) they're dependable (2) labor-saving (3) designed to do the job in an efficient manner (4) they are made to last (5) and Billings Shop Tools are guaranteed free of manufacturing imperfections.



For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.



CARBON STEEL

BILLINGS CARBON STEEL WRENCHES drop forged from special analysis steel which is produced to rigid specifications, openings milled or broached, surfaces and edges smooth, heads bright and clearly stamped showing class number, size and trade mark, hardened and finished with black CRACKLE ENAMEL baked on to provide greater protection for the wrench, better gripping qualities to the handle and a maximum resistance to wear.

FINISH — BLACK CRACKLE ENAMEL WITH BRIGHT HEADS

No.	Nominal Opening	Amer. Std. Heavy Nut (USS) Size Bolts	Amer. Std. Hex Head Cap Screw Dia. Screw	Amer. Std. Light Nut (SAE) Size Bolts	Amer. Std. Reg. Nut Size Bolts	Length (App.)	Thickness Head	No.
S000	3/16	—	—	—	†2, †3	3	5/32	S000
S00	1/4	—	—	—	†4	3 1/2	15/64	S00
00	5/16	—	—	—	†5, †6	3 1/2	15/64	00
700	3/8	—	—	—	†10	4	1/4	700
0	13/32	—	—	—	—	4	1/4	0
701	7/16	—	1 4	1 4	†12, 1/4	4 5/8	9/32	701
1	1/2	1/4	5/16	5/16	—	4 5/8	9/32	1
702	9/16	—	3/8	3/8	5/16	5 1/2	5/16	702
2	19/32	5/16	—	—	—	5 1/2	5/16	2
703	5/8	—	7/16	7/16	3/8	6 3/8	11/32	703
3	11/16	3/8	—	—	—	6 3/8	11/32	3
704	3/4	—	1 2	1/2	7/16	7 1/4	3/8	704
4	25/32	7/16	—	—	—	7 1/4	3/8	4
705	13/16	—	9/16	—	1/2	8 1/8	7/16	705
5	7/8	1/2	5/8	9/16	9/16	8 1/8	7/16	5
6	15/16	9/16	—	5/8	—	9 1/4	1/2	6
706	1	—	3 4	—	5/8	9 1/4	1/2	706
7	1 1/16	5/8	—	3/4	—	10 1/2	9/16	7
707	1 1/8	—	7/8	—	3/4	10 1/2	9/16	707
8	1 1/4	3/4	*1	7/8	—	12	5/8	8
8A	1 5/16	—	1	—	7/8	12	5/8	8A
9	1 7/16	7/8	—	1	—	13 1/2	23/32	9
709	1 1/2	—	*1 1/4, 1 1/8	—	1	13 1/2	23/32	709
10	1 5/8	1	—	1 1/8	—	15	25/32	10
10A	1 11/16	—	1 1/4	—	1 1/8	15	25/32	10A
11	1 13/16	1 1/8	—	1 1/4	—	16 1/2	7/8	11
11A	1 7/8	—	—	—	1 1/4	16 1/2	7/8	11A
12	2	1 1/4	—	1 3/8	—	18 1/4	15/16	12
12A	2 1/16	—	—	—	1 3/8	18 1/4	15/16	12A
13	2 3/16	1 3/8	—	1 1/2	—	20	1	13
13A	2 1/4	—	—	—	1 1/2	20	1	13A
14	2 3/8	1 1/2	—	—	—	22	1 1/16	14
14A	2 7/16	—	—	—	1 5/8	22	1 1/16	14A
15	2 9/16	1 5/8	—	—	—	24	1 1/8	15
15A	2 5/8	—	—	—	1 3/4	24	1 1/8	15A
16	2 3/4	1 3/4	—	—	—	27	1 7/32	16
16B	2 13/16	—	—	—	1 7/8	27	1 7/32	16B
16A	2 15/16	1 7/8	—	—	—	27	1 7/32	16A
17A	3	—	—	—	2	30	1 3/8	17A
17	3 1/8	2	—	—	—	30	1 3/8	17
18A	3 3/8	—	—	—	2 1/4	34	1 1/2	18A
18	3 1/2	2 1/4	—	—	—	34	1 1/2	18
19B	3 3/4	—	—	—	2 1/2	38	1 5/8	19B
19	3 7/8	2 1/2	—	—	—	38	1 5/8	19
19C	4 1/8	—	—	—	2 3/4	38	1 5/8	19C
19A	4 1/4	2 3/4	—	—	—	38	1 5/8	19A
20B	4 1/2	—	—	—	3	42	1 7/8	20B
20	4 5/8	3	—	—	—	42	1 7/8	20
20A	5	3 1/4	—	—	—	42	1 7/8	20A

† American Standard Machine Screw and Stove Bolt Nuts.

* Old Style Cap Screw — Now Obsolete.

Nos. 17A to 20A inclusive, have a hole drilled in end of handle.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.



BILLINGS' CARBON STEEL WRENCHES
drop-forged from special analysis steel which is produced to rigid specifications, openings milled or broached, surfaces and edges smooth, heads bright and clearly stamped showing class number, size and trade mark, hardened and finished with black CRACKLE ENAMEL baked on to provide greater protection for the wrench, better gripping qualities to the handle and a maximum resistance to wear.



CARBON STEEL

FINISH — BLACK CRACKLE ENAMEL WITH BRIGHT HEADS

No.	Nominal Openings	Amer. Std. Heavy Nut (USS) Size Bolts	Amer. Std. Hex Head Cap Screws Dia. Screws	Amer. Std. Light Nut (SAE) Size Bolts	Amer. Std. Reg. Nut Size Bolts	Length (App.)	Thick-ness Heads	No.
721	5/16 & 3/8	— & —	— & —	— & —	†5, †6 & †10	4	1/4	721
723	3/8 & 7/16	— & —	— & 1/4	— & 1/4	†10 & †12, 1/4	4 1/2	9/32	723
725	7/16 & 1/2	— & 1/4	1/4 & 5/16	1/4 & 5/16	†12, 1/4 & —	5	5/16	725
725A	7/16 & 9/16	— & —	1/4 & 3/8	1/4 & 3/8	†12, 1/4 & 5/16	5	5/16	725A
725B	1/2 & 9/16	1/4 & —	5/16 & 3/8	5/16 & 3/8	— & 5/16	5 1/2	5/16	725B
25	1/2 & 19/32	1/4 & 5/16	5/16 & —	5/16 & —	— & —	5 1/2	5/16	25
727	9/16 & 5/8	— & —	3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	6	11/32	727
27	19/32 & 11/16	5/16 & 3/8	— & —	— & —	— & —	6 1/2	3/8	27
27B	5/8 & 11/16	— & 3/8	7/16 & —	7/16 & —	3/8 & —	6 1/2	3/8	27B
28	19/32 & 25/32	5/16 & 7/16	— & —	— & —	— & —	7	13/32	28
729	5/8 & 3/4	— & —	7/16 & 1/2	7/16 & 1/2	3/8 & 7/16	7	13/32	729
29B	11/16 & 3/4	3/8 & —	— & 1/2	— & 1/2	— & 7/16	7	13/32	29B
29	11/16 & 25/32	3/8 & 7/16	— & —	— & —	— & —	7	13/32	29
29C	11/16 & 13/16	3/8 & —	— & 9/16	— & —	— & 1/2	7	13/32	29C
731	3/4 & 13/16	— & —	1/2 & 9/16	1/2 & —	7/16 & 1/2	9	15/32	731
731A	3/4 & 7/8	— & 1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	9	15/32	731A
31B	25/32 & 13/16	7/16 & —	— & 9/16	— & —	— & 1/2	9	15/32	31B
31	25/32 & 7/8	7/16 & 1/2	— & 5/8	— & 9/16	— & 9/16	9	15/32	31
731B	13/16 & 7/8	— & 1/2	9/16 & 5/8	— & 9/16	1/2 & 9/16	9	15/32	731B
32B	13/16 & 15/16	— & 9/16	9/16 & —	— & 5/8	1/2 & —	10	1/2	32B
33A	7/8 & 15/16	1/2 & 9/16	5/8 & —	9/16 & 5/8	9/16 & —	10	1/2	33A
733	7/8 & 1	1/2 & —	5/8 & 3/4	9/16 & —	9/16 & 5/8	10	1/2	733
34	7/8 & 1 1/16	1/2 & 5/8	5/8 & —	9/16 & 3/4	9/16 & —	11	19/32	34
34A	15/16 & 1 1/16	9/16 & 5/8	— & —	5/8 & 3/4	— & —	11	19/32	34A
735	1 & 1 1/8	— & —	3/4 & 7/8	— & —	5/8 & 3/4	11	19/32	735
36B	1 1/16 & 1 1/8	5/8 & —	— & 7/8	3/4 & —	— & 3/4	11 3/16	9/16	36B
37	1 1/16 & 1 1/4	5/8 & 3/4	— & *1	3/4 & 7/8	— & —	12	19/32	37
737	1 1/8 & 1 1/4	— & 3/4	7/8 & *1	— & 7/8	3/4 & —	12	19/32	737
37A	1 1/8 & 1 5/16	— & —	7/8 & 1	— & —	3/4 & 7/8	12	19/32	37A
39B	1 1/4 & 1 5/16	3/4 & —	*1 & 1	7/8 & —	— & 7/8	14	3/4	39B
39	1 1/4 & 1 7/16	3/4 & 7/8	*1 & —	7/8 & 1	— & —	14	3/4	39
39A	1 5/16 & 1 1/2	— & —	1 & 1 1/8, *1 1/4	— & —	7/8 & 1	14	3/4	39A
39C	1 3/8 & 1 7/16	— & 7/8	*1 1/8 & —	— & 1	— & —	14	3/4	39C
41	1 7/16 & 1 5/8	7/8 & 1	— & —	1 & 1 1/8	— & —	16	13/16	41
41B	1 1/2 & 1 5/8	— & 1	1 1/8, *1 1/4 & —	— & 1 1/8	1 & —	16	13/16	41B
42A	1 1/2 & 1 11/16	— & —	1 1/8, *1 1/4 & 1 1/4	— & —	1 & 1 1/8	17	15/16	42A
43	1 5/8 & 1 13/16	1 & 1 1/8	— & —	1 1/8 & 1 1/4	— & —	17	15/16	43
44A	1 11/16 & 1 7/8	— & —	1 1/4 & —	— & —	1 1/8 & 1 1/4	20	1	44A
45	1 13/16 & 2	1 1/8 & 1 1/4	— & —	1 1/4 & 1 3/8	— & —	20	1	45
45A	1 7/8 & 2 1/16	— & —	— & —	— & —	1 1/4 & 1 3/8	20	1	45A
47	2 & 2 3/16	1 1/4 & 1 3/8	— & —	1 3/8 & 1 1/2	— & —	23	1 1/16	47
47B	2 1/16 & 2 1/4	— & —	— & —	— & —	1 3/8 & 1 1/2	23	1 1/16	47B
49	2 3/8 & 2 3/8	1 3/8 & 1 1/2	— & —	1 1/2 & —	— & —	23	1 1/16	49
49A	2 1/4 & 2 7/16	— & —	— & —	— & —	1 1/2 & 1 5/8	23	1 1/16	49A

†American Standard Machine Screw and Stove Bolt Nuts.

*Old Style Cap Screw — Now Obsolete.

For Metric Standards see Page 82.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

CHECK NUT single and double head



15° ANGLE SINGLE HEAD CARBON STEEL — THIN —

Single and double head Check Nut Wrenches are slender and are properly balanced to efficiently perform the job for which they are intended.

FINISH — BLACK CRACKLE ENAMEL WITH BRIGHT HEADS

No.	Nominal Opening	Amer. Std. Hvy. Jam Nut (USS) Size Bolts	Amer. Std. Light Nut (SAE) Size Bolts	Amer. Std. Reg. Jam Nut Size Bolts	Length (App.)	Thickness Head	No.
601A	7/16	—	1/4	1/4, †12	4	5/32	601A
601	1/2	1/4	5/16	—	4	5/32	601
602A	9/16	—	3/8	5/16	4 3/4	11/64	602A
602	19/32	5/16	—	—	4 3/4	11/64	602
603A	5/8	—	7/16	3/8	5 1/2	3/16	603A
603	11/16	3/8	—	—	5 1/2	3/16	603
604A	3/4	—	1/2	7/16	6 1/4	7/32	604A
604	25/32	7/16	—	—	6 1/4	7/32	604
605A	13/16	—	—	1/2	7	1/4	605A
605	7/8	1/2	9/16	9/16	7	1/4	605
606	15/16	9/16	5/8	—	8	9/32	606
606B	1	—	—	5/8	8	9/32	606B
607	1 1/16	5/8	3/4	—	9	5/16	607
607A	1 1/8	—	—	3/4	9	5/16	607A
608	1 1/4	3/4	7/8	—	10	3/8	608
608A	1 5/16	—	—	7/8	10	3/8	608A
609	1 7/16	7/8	1	—	11 1/2	7/16	609
609A	1 1/2	—	—	1	11 1/2	7/16	609A
610	1 5/8	1	1 1/8	—	13 1/2	1/2	610
610A	1 11/16	—	—	1 1/8	13 1/2	1/2	610A



15° ANGLE DOUBLE HEAD CARBON STEEL — THIN —

BILLINGS' CARBON STEEL WRENCHES drop-forged from special analysis steel which is produced to rigid specifications, openings milled or broached, surfaces and edges smooth, heads bright and clearly stamped showing class number, size and trade mark, hardened and finished with black CRACKLE ENAMEL baked on to provide greater protection for the wrench, better gripping qualities to the handle and a maximum resistance to wear.

FINISH — BLACK CRACKLE ENAMEL WITH BRIGHT HEADS

No.	Nominal Openings	Amer. Std. Heavy Jam Nut (USS) Size Bolts	Amer. Std. Light Nut (SAE) Size Bolts	Amer. Std. Regular Jam Nut Size Bolts	Length (App.)	Thickness Heads	No.
623D	7/16 & 1/2	— & 1/4	1/4 & 5/16	1/4, †12 & —	4 1/2	11/64	623D
624A	7/16 & 9/16	— & —	1/4 & 3/8	1/4, †12 & 5/16	4 1/2	11/64	624A
624B	1/2 & 9/16	1/4 & —	5/16 & 3/8	— & 5/16	4 1/2	11/64	624B
625	1/2 & 19/32	1/4 & 5/16	5/16 & —	— & —	4 1/2	11/64	625
626S	9/16 & 5/8	— & —	3/8 & 7/16	5/16 & 3/8	5 1/2	3/16	626S
627	19/32 & 11/16	5/16 & 3/8	— & —	— & —	5 1/2	3/16	627
629D	5/8 & 3/4	— & —	7/16 & 1/2	3/8 & 7/16	5 1/2	3/16	629D
629	11/16 & 25/32	3/8 & 7/16	— & —	— & —	7	7/32	629
630B	3/4 & 13/16	— & —	1/2 & —	7/16 & 1/2	7	7/32	630B
630E	3/4 & 7/8	— & 1/2	1/2 & 9/16	7/16 & 9/16	7	7/32	630E
631	25/32 & 7/8	7/16 & 1/2	— & 9/16	— & 9/16	7	7/32	631
631A	13/16 & 7/8	— & 1/2	— & 9/16	1/2 & 9/16	7	7/32	631A
632C	7/8 & 15/16	1/2 & 9/16	9/16 & 5/8	9/16 & —	8 1/2	1/4	632C
634A	7/8 & 1	1/2 & —	9/16 & —	9/16 & 5/8	8 1/2	1/4	634A
634B	15/16 & 1 1/16	9/16 & 5/8	5/8 & 3/4	— & —	8 1/2	1/4	634B
635D	1 & 1 1/8	— & —	— & —	5/8 & 3/4	10 1/2	9/32	635D
637	1 1/16 & 1 1/4	5/8 & 3/4	3/4 & 7/8	— & —	10 1/2	9/32	637
637A	1 1/8 & 1 5/16	— & —	— & —	3/4 & 7/8	10 1/2	9/32	637A
639	1 1/4 & 1 7/16	3/4 & 7/8	7/8 & 1	— & —	12 1/2	13/32	639
640A	1 5/16 & 1 1/2	— & —	— & —	7/8 & 1	12 1/2	13/32	640A

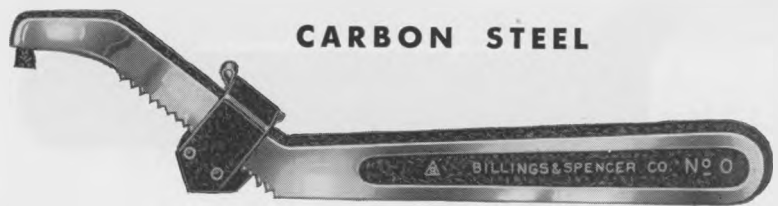
†American Standard Machine Screw and Stove Bolt Nuts.

For Whitworth Standards see Page 81, for Metric Page 81.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.



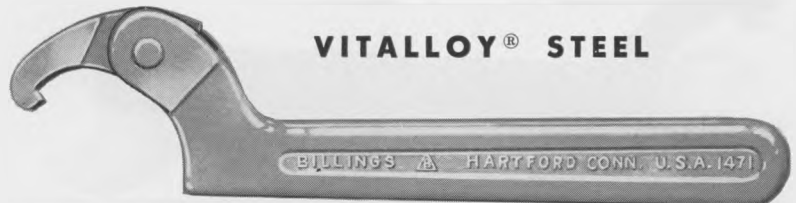
Made from Carbon Steel to Billings' specifications, handle drop-forged, black lacquer finish with flats disced bright. Because of its adjustable feature this Spanner, produced in four sizes, will take the place of solid spanners on lock collars or nuts from 3/4" to 4 3/4" in diameter. The position of the hook and adjustment pad relative to the circumference does not change on the varying diameters. To adjust, press on the top of the movable jaw and slide it into a new position. Perfect fit, absolute rigidity and quick application.

**CARBON STEEL****FINISH — BLACK LACQUERED — FLATS DISCED BRIGHT****MODEL L**

No.	Takes Circle Inches	Diameter of Pin Inches	Length of Pin Inches	Length of Wrench Inches	No.
0	3/4 to 2	3/16	1/8	7	0
1	2 to 4	1/4	1/4	9	1
2	2 to 4	5/16	1/4	9	2
3	2 to 4 3/4	†1/4 & 3/8	1/4	10 1/8	3

†Rectangular Pin.

Drop forged from Billings' Vitalloy® Steel. The jaw is hardened and tempered and the wrench is furnished chrome-plated. This wrench has exceptional strength and because of the ease of adjustment provides for a wide range of sizes. A selection of four gives a range from 3/4" to 6 1/4" in diameter. Adaptable and recommended for use on spindle bearings and for adjusting collars and slotted rings.

**VITALLOY® STEEL****FINISH — CHROME PLATED — MADE FROM SELECTED ALLOY STEEL****ADJUSTABLE HOOK**

No.	Capacity For Circles Inches Diameter	Capacity For Slotted Navy Fire Hose Couplings	Extreme Length (App.)	THICKNESS		Depth of Hook	No.
				Handle	Hook		
1471	3/4 to 2	— —	6 3/8	1/4	11/32	1/8	1471
1472	1 1/4 to 3	— —	8 1/8	9/32	13/32	5/32	1472
1474	2 to 4 3/4	1 1/2 to 2 1/2	11 3/8	5/16	15/32	3/16	1474
1476	4 to 6 1/4	2 1/2 to 4	15 1/2	7/16	9/16	1/4	1476

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.



Made from Carbon Steel to Billings' specifications, drop forged, pins integral with the wrench. Billings' Spanners are designed to give correct balance in the various sizes. The surfaces are smooth and clean. The pins are milled and the wrench completely hardened.

FINISH — BLACK LACQUERED

No.	PINS			Radius of Span	Length End of Handle to Center of Pins	Thickness	No.
	Distance C. to C.	Dia. Milled	Length (App.)				
418	1	3/16	3/16	11/32	4 1/2	3/16	418
420	1 1/4	7/32	7/32	29/64	4 15/16	3/16	420
422	1 1/2	7/32	7/32	9/16	5 3/8	3/16	422
424	1 3/4	7/32	7/32	11/16	5 13/16	7/32	424
426	2	1/4	1/4	13/16	6 1/4	7/32	426
428	2 1/4	1/4	1/4	15/16	6 11/16	7/32	428
430	2 1/2	9/32	1/4	1 3/64	7 1/8	1/4	430
432	2 3/4	9/32	1/4	1 11/64	7 5/8	1/4	432
434	3	5/16	5/16	1 19/64	8 1/8	1/4	434
436	3 1/4	5/16	5/16	1 13/32	8 9/16	1/4	436
438	3 1/2	5/16	5/16	1 33/64	9	1/4	438
440	3 3/4	3/8	5/16	1 5/8	9 1/2	1/4	440
442	4	3/8	5/16	1 3/4	10	1/4	442

PIN
CARBON STEEL



Drop-forged from Carbon Steel to Billings' specifications. Pins are forged integral with wrench. Continued demand proves the advantages of the Billings design, correct balance and smooth overall working efficiency.

FINISH — BLACK LACQUERED

No.	Circle Diameter	Length, Approx.	Fin. Dia. of Pin	Length of Pin, Inches	No.
452	1	4	3/16	1/8	452
453	1 1/4	4 1/2	13/64	1/8	453
454	1 1/2	5	7/32	5/32	454
455	1 3/4	5 1/2	15/64	5/32	455
456	2	6	1/4	3/16	456
457	2 1/4	6 1/2	17/64	3/16	457
458	2 1/2	7	9/32	7/32	458
459	2 3/4	7 1/2	19/64	7/32	459
460	3	8	5/16	1/4	460
461	3 1/4	8 1/2	21/64	1/4	461
462	3 1/2	9	11/32	9/32	462
463	3 3/4	9 1/2	23/64	9/32	463
464	4	10	3/8	5/16	464

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.



CARBON STEEL **22 1/2° ANGLE**
SINGLE HEAD

FINISH — BLACK CRACKLE ENAMEL WITH BRIGHT HEADS

No.	Nominal Openings For Set Screw Size	Length (Approx.)	Thickness Heads	No.
500	3/16	3	3/16	500
501	1/4	3 3/4	1/4	501
502	5/16	4 1/2	5/16	502
503	3/8	5 1/4	11/32	503
504	7/16	6	3/8	504
505	1/2	6 3/4	7/16	505
506	9/16	7 1/2	1/2	506
507	5/8	8 1/2	9/16	507
508	3/4	9 1/2	5/8	508
509	7/8	10 3/4	11/16	509
510	1	12	3/4	510
511	1 1/8	12	3/4	511

Both the Single and the Double Head BILLINGS' CARBON STEEL Set Screw Wrenches are drop-forged from special analysis steel which is produced to rigid specifications, openings milled or broached, surfaces and edges smooth, heads bright and clearly stamped showing class number, size and trade mark, hardened and finished with black CRACKLE ENAMEL baked on to provide greater protection for the wrench, better gripping qualities to the handle and a maximum resistance to wear.

**FOR SET SCREWS
AND SQUARE NUTS**



CARBON STEEL **22 1/2° ANGLE**
DOUBLE HEAD

FINISH — BLACK CRACKLE ENAMEL WITH BRIGHT HEADS

No.	Nominal Openings For Set Screw Size	Length (Approx.)	Thickness Heads	No.
525	1/4 & 5/16	4	1/4	525
527	5/16 & 3/8	5	5/16	527
529	3/8 & 7/16	6	11/32	529
531	7/16 & 1/2	6 3/4	3/8	531
533	1/2 & 9/16	7 1/2	7/16	533
535	9/16 & 5/8	8 1/2	1/2	535
537	5/8 & 3/4	10	9/16	537
539	3/4 & 7/8	11 1/2	5/8	539
541	7/8 & 1	12 1/2	11/16	541

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.


**FOR SET SCREWS
CARBON STEEL**
FINISH — BLACK CRACKLE ENAMEL WITH BRIGHT HEADS

No.	Open Head Set Screw Size	Closed Head Set Screw Size	Length (App.)	Thickness Heads	No.
554	7/16	7/16	5 1/2	1/2	554
555	1/2	1/2	6	9/16	555
555B	9/16	1/2	6	9/16	555B
555C	9/16	9/16	6	9/16	555C
556	5/8	5/8	6 3/4	5/8	556
556B	11/16	5/8	6 3/4	5/8	556B
556C	11/16	11/16	6 3/4	5/8	556C
557	3/4	3/4	7 1/2	11/16	557

These Double Head BILLINGS' CARBON STEEL Tool Post Wrenches are drop-forged from special analysis steel which is produced to rigid specifications, openings milled or broached, surfaces and edges smooth, heads bright and clearly stamped showing class number, size and trade mark, hardened and finished with black CRACKLE ENAMEL baked on to provide greater protection for the wrench, better gripping qualities to the handle and a maximum resistance to wear.


**FOR NUTS
AND SET SCREWS
CARBON STEEL**
FINISH — BLACK CRACKLE ENAMEL WITH BRIGHT HEADS

No.	Nominal Openings (Open End)	Amer. Std. Heavy Nut (USS) Size Bolt	Closed Head for Set Screw Size	Length (App.)	Thickness Heads	No.
562	11/16	3/8	9/16	6 1/2	1/2	562
563	7/8	1/2	7/16	7 1/4	9/16	563
563B	7/8	1/2	1/2	7 1/4	9/16	563B
563C	7/8	1/2	9/16	7 1/4	9/16	563C
563D	7/8	1/2	5/8	7 1/4	9/16	563D
564	1 1/16	5/8	5/8	7 1/4	5/8	564
565	1 1/16	5/8	3/4	8	5/8	565
566	1 1/4	3/4	3/4	9	11/16	566
566B	1 1/4	3/4	7/8	9	11/16	566B
567	1 1/4	3/4	1	10 1/4	13/16	567
567B	1 7/16	7/8	7/8	10 1/4	13/16	567B
567C	1 7/16	7/8	1	10 1/4	13/16	567C
568	1 5/8	1	7/8	11	15/16	568
568B	1 5/8	1	1	11	15/16	568B
568C	1 13/16	1 1/8	1	11 1/2	1 1/16	568C
568D	2	1 1/4	1	11 1/2	1 1/16	568D

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.



22½° ANGLE SINGLE HEAD SQUARE OPENING CARBON STEEL



FINISH — BLACK CRACKLE ENAMEL WITH BRIGHT HEADS

No.	Nominal Opening For Set Screw Size	Length (App.)	Thickness Head	No.
580	3/16	3 1/4	9/32	580
581	1/4	3 1/4	9/32	581
582	5/16	4	3/8	582
583	3/8	4	3/8	583
584	7/16	5 1/4	15/32	584
585	1/2	5 1/4	15/32	585
586	9/16	6 3/4	9/16	586
587	5/8	6 3/4	9/16	587
588	3/4	8	3/4	588
589	7/8	9	11/16	589
590	1	10	3/4	590

These Single Head BILLINGS' CARBON STEEL Box Wrenches are drop-forged from special analysis steel which is produced to rigid specifications, openings broached, surfaces and edges smooth, heads bright, hardened and finished with black CRACKLE ENAMEL baked on to provide greater protection for the wrench, better gripping qualities to the handle and a maximum resistance to wear.

15° ANGLE SINGLE HEAD



HEX OPENING — CARBON STEEL

FINISH — BLACK CRACKLE ENAMEL WITH BRIGHT HEADS

No.	Nominal Opening Across Flats	Amer. Std. Heavy Nut (USS) Size Bolts	Amer. Std. Hex Head Cap Screws Dia. Screws	Amer. Std. Light Nut (SAE) Size Bolts	Amer. Std. Reg. Nut Size Bolts	Length (App.)	HEAD		No.
							Thick- ness	Outside Dia.	
801A	7/16	—	1/4	1/4	1/4, †12	4	1/4	29/32	801A
801	1/2	1/4	5/16	5/16	—	4	1/4	29/32	801
802A	9/16	—	3/8	3/8	5/16	4 7/8	9/32	1 3/32	802A
802	19/32	5/16	—	—	—	4 7/8	9/32	1 3/32	802
803A	5/8	—	7/16	7/16	3/8	6	5/16	1 1/4	803A
803	11/16	3/8	—	—	—	6	5/16	1 1/4	803
804A	3/4	—	1/2	1/2	7/16	7	11/32	1 3/8	804A
804	25/32	7/16	—	—	—	7	11/32	1 3/8	804
805A	13/16	—	9/16	—	1/2	8	3/8	1 1/2	805A
805	7/8	1/2	5/8	9/16	9/16	8	3/8	1 1/2	805
806	15/16	9/16	—	5/8	—	9	7/16	1 5/8	806
806B	1	—	3/4	—	5/8	9	7/16	1 5/8	806B
807	1 1/16	5/8	—	3/4	—	10	1/2	1 3/4	807
807A	1 1/8	—	7/8	—	3/4	10	1/2	1 3/4	807A
808	1 1/4	3/4	*1	7/8	—	11 1/2	9/16	2 1/16	808
808A	1 5/16	—	1	—	7/8	11 1/2	9/16	2 1/16	808A
809	1 7/16	7/8	—	1	—	13	11/16	2 3/8	809
809A	1 1/2	—	*1 1/4, 1 1/8	—	1	13	11/16	2 3/8	809A
810	1 5/8	1	—	1 1/8	—	15	3/4	2 5/8	810
810A	1 11/16	—	1 1/4	—	1 1/8	15	3/4	2 5/8	810A
811	1 13/16	1 1/8	—	1 1/4	—	17	13/16	2 7/8	811
811A	1 7/8	—	—	—	1 1/4	17	13/16	2 7/8	811A
812	2	1 1/4	—	1 3/8	—	19	7/8	3 1/4	812

†American Standard Machine Screw and Stove Bolt Nuts

*Old Style Cap Screws — Now Obsolete.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

CONSTRUCTION



FINISH — HARDENED — NATURAL RUSTPROOF

No.	Nominal Opening	Amer. Std. Heavy Nut (USS) Size Bolts	Amer. Std. Reg. Nut Size Bolts	Length Approx.	Thickness Head	No.
S-203A	5/8	—	3/8	9 1/2	13/32	S-203A
S-203	11/16	3/8	—	9 1/2	13/32	S-203
S-204A	3/4	—	7/16	9 1/2	13/32	S-204A
S-204	25/32	7/16	—	9 1/2	13/32	S-204
S-205A	13/16	—	1/2	11 1/2	7/16	S-205A
S-205	7/8	1/2	9/16	11 1/2	7/16	S-205
S-206	15/16	9/16	—	12 1/2	1/2	S-206
S-206B	1	—	5/8	12 1/2	1/2	S-206B
S-207	1 1/16	5/8	—	14	9/16	S-207
S-207A	1 1/8	—	3/4	14	9/16	S-207A
S-208	1 1/4	3/4	—	16	5/8	S-208
S-208A	1 5/16	—	7/8	16	5/8	S-208A
S-209	1 7/16	7/8	—	17 1/2	11/16	S-209
S-209A	1 1/2	—	1	17 1/2	11/16	S-209A
S-210	1 5/8	1	—	19	3/4	S-210
S-210A	1 11/16	—	1 1/8	19	3/4	S-210A
S-211	1 13/16	1 1/8	—	21	7/8	S-211
S-211A	1 7/8	—	1 1/4	21	7/8	S-211A
S-212	2	1 1/4	—	21	7/8	S-212

15° ANGLE — SHORT TANG CARBON STEEL

Firm hold on nuts assured because of deep throated, uniform, accurately milled or broached openings. Short tapered tang for easy and quick insertion into bolt holes when aligning holes on the job. All sizes correctly balanced to make rugged work easier. Natural rustproof finish for longer life.

STRUCTURAL



FINISH — HARDENED — NATURAL RUSTPROOF

No.	Nominal Opening	Amer. Std. Heavy Nut (USS) Size Bolts	Amer. Std. Reg. Nut Size Bolts	Length Approx.	Thickness Head	HANDLE OFFSET		No.
						At Head	At End	
901A	7/16	—	1/4	9 1/2	11/32	9/16	1 1/2	901A
901	1/2	1/4	—	9 1/2	11/32	9/16	1 1/2	901
901B	9/16	—	5/16	9 1/2	11/32	9/16	1 1/2	901B
902	19/32	5/16	—	9 1/2	11/32	9/16	1 1/2	902
903A	5/8	—	3/8	12	7/16	13/16	1 11/16	903A
903	11/16	3/8	—	12	7/16	13/16	1 11/16	903
904A	3/4	—	7/16	12	7/16	13/16	1 11/16	904A
904	25/32	7/16	—	12	7/16	13/16	1 11/16	904
905A	13/16	—	1/2	14 1/2	17/32	15/16	1 7/8	905A
905	7/8	1/2	9/16	14 1/2	17/32	15/16	1 7/8	905
906	15/16	9/16	—	14 1/2	17/32	15/16	1 7/8	906
906B	1	—	5/8	14 1/2	17/32	15/16	1 7/8	906B
907	1 1/16	5/8	—	17	5/8	1 1/8	2 3/8	907
907A	1 1/8	—	3/4	17	5/8	1 1/8	2 3/8	907A
908	1 1/4	3/4	—	19	11/16	1 5/16	2 3/4	908
908A	1 5/16	—	7/8	19	11/16	1 5/16	2 3/4	908A
909	1 7/16	7/8	—	21	3/4	1 3/8	2 7/8	909
909A	1 1/2	—	1	21	3/4	1 3/8	2 7/8	909A
910	1 5/8	1	—	23	13/16	1 7/16	3 5/16	910
910A	1 11/16	—	1 1/8	23	13/16	1 7/16	3 5/16	910A
911	1 13/16	1 1/8	—	25	7/8	1 5/8	3 7/16	911
911A	1 7/8	—	1 1/4	25	7/8	1 5/8	3 7/16	911A
912	2	1 1/4	—	25	7/8	1 5/8	3 7/16	912

STRAIGHT OPENING OFFSET HEAD LONG TANG

CARBON STEEL

Jaws are tapered with deep openings for full holding power on nuts. Offset and angle of handle for clearance and safety of operator's hands. Long tang aids in bringing bolt holes into alignment. Correctly balanced. Fits belt-loop, convenient for ready grasping.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.



Made of CARBON STEEL to Billings' specifications, forged, openings broached, surface shot-blasted, hardened and black lacquered, face bright. The offset and length of handle are proportioned, in all sizes, to provide the proper clearance between work surface and handle.

FINISH — BLACK LACQUERED — FACE BRIGHT

No.	Nominal Opening	HEXAGON OPENING				Diameter of Head	Length of Handle	From Face of Wrench to Handle	No.
		Amer. Std. Heavy Nut (USS) Size Bolts	Amer. Std. Cap Screw Dia. Screw	Amer. Std. Light Nut (SAE) Size Bolts	Amer. Std. Reg. Nut Size Bolts				
261A	5/16	—	—	—	†5, †6	1/2	3 1/4	3/4	261A
262D	3/8	—	—	—	†10	5/8	4	13/16	262D
263A	13/32	—	—	—	—	5/8	4	13/16	263A
263D	7/16	—	1/4	1/4	†12, 1/4	21/32	4	13/16	263D
264A	1/2	1/4	5/16	5/16	—	3/4	4 3/4	1 1/4	264A
265D	9/16	—	3/8	3/8	5/16	7/8	5 7/8	1 7/16	265D
265A	19/32	5/16	—	—	—	7/8	5 7/8	1 7/16	265A
266D	5/8	—	7/16	7/16	3/8	1	6 1/4	1 11/16	266D
267A	11/16	3/8	—	—	—	1 1/8	7	1 3/4	267A
267D	3/4	—	1/2	1/2	7/16	1 1/8	7	1 3/4	267D
268A	25/32	7/16	—	—	—	1 1/4	7 3/4	2	268A
268D	13/16	—	9/16	—	1/2	1 1/4	7 3/4	2	268D
269A	7/8	1/2	5/8	9/16	9/16	1 1/4	8 3/8	2 1/8	269A
270S	15/16	9/16	—	5/8	—	1 1/2	9 1/8	2 3/16	270S
270D	1	—	3/4	—	5/8	1 1/2	9 1/8	2 3/8	270D
271A	1 1/16	5/8	—	3/4	—	1 5/8	10	2 1/2	271A
271D	1 1/8	—	7/8	—	3/4	1 5/8	10	2 1/2	271D
273A	1 1/4	3/4	*1	7/8	—	1 7/8	11 5/8	3	273A
273B	1 5/16	—	1	—	7/8	1 7/8	11 5/8	3	273B
275A	1 7/16	7/8	—	1	—	2 1/8	13 1/4	3 3/8	275A
275D	1 1/2	—	1 1/8, *1 1/4	—	1	2 1/8	13 1/4	3 3/8	275D
276A	1 5/8	1	—	1 1/8	—	2 1/2	14 7/8	3 11/16	276A
276B	1 11/16	—	1 1/4	—	1 1/8	2 1/2	14 7/8	3 11/16	276B
277A	1 13/16	1 1/8	—	1 1/4	—	2 1/2	16 1/2	4	277A
278A	2	1 1/4	—	1 3/8	—	2 3/4	18 1/4	4 3/8	278A

†American Standard Machine Screw and Stove Bolt Nuts.

*Old Style Cap Screw — Now Obsolete.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.



SQUARE OPENING CARBON STEEL

Made of Carbon Steel to Billings' specifications, forged, openings broached, surface shot-blasted, hardened and black lacquered with bright face. The offset handle is correctly proportioned to give adequate gripping space between knuckles and working surface. The length of the handle is designed to give a well balanced wrench in all sizes.

FINISH — BLACK LACQUERED — FACE BRIGHT

No.	Nominal Opening	SQUARE OPENING				Length of Handle	From Face of Wrench to Handle	No.
		Amer. Std. Heavy Nut (USS) Size Bolts	Set Screw Size	Amer. Std. Reg. Nut Size Bolts	Diameter of Head			
261 J	1/4	—	1/4	—	1/2	3 1/4	3/4	261 J
262H	5/16	—	5/16	—	5/8	4	13/16	262H
263H	3/8	—	3/8	—	3/4	4 3/4	1 1/4	263H
265H	7/16	—	7/16	1/4	7/8	5 7/8	1 7/16	265H
266H	1/2	1/4	1/2	—	1	6 1/4	1 11/16	266H
267H	9/16	—	9/16	5/16	1 1/8	7	1 3/4	267H
268H	5/8	—	5/8	3/8	1 1/4	7 3/4	2	268H
268P	11/16	3/8	—	—	1 1/4	7 3/4	2	268P
269H	3/4	—	3/4	7/16	1 1/2	8 1/2	2 3/16	269H
271H	7/8	1/2	7/8	9/16	1 5/8	10	2 1/2	271H
273H	1	—	1	5/8	1 7/8	11 5/8	2 15/16	273H
274H	1 1/8	—	1 1/8	3/4	2 1/8	12 3/8	3 5/16	274H
276H	1 1/4	3/4	1 1/4	—	2 1/8	14 7/8	3 5/16	276H

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

Forged from Carbon Steel to Billings' specifications, opening broached, surface shot-blasted and black lacquered, face bright, hardened. In each size the correct proportion of shank to pin handle is a feature of these Billings wrenches.



**HEX OPENING
CARBON STEEL**

FINISH — BLACK LACQUERED — FACE BRIGHT

No.	Nominal Opening	HEXAGON OPENINGS				Diameter of Head	Length (App.)	Size of Hex on Handle End	Length of Pin Handle	No.
		Amer. Std. Heavy Nut (USS) Size Bolts	Amer. Std. Cap Screws Dia. Screws	Amer. Std. Light Nut (SAE) Size Bolts	Amer. Std. Reg. Nut Size Bolts					
961A	5/16	—	—	—	†5, †6	1/2	4	13/32	4	961A
962D	3/8	—	—	—	†10	5/8	4 7/16	1/2	4 1/2	962D
963A	13/32	—	—	—	—	5/8	4 1/2	1/2	4 1/2	963A
963D	7/16	—	1/4	1/4	†12, 1/4	41/64	4 1/2	1/2	4 1/2	963D
964A	1/2	1/4	5/16	5/16	—	3/4	5 1/4	19/32	5 1/4	964A
965D	9/16	—	3/8	3/8	5/16	7/8	5 3/4	11/16	5 3/4	965D
965A	19/32	5/16	—	—	—	7/8	5 3/4	11/16	5 3/4	965A
966D	5/8	—	7/16	7/16	3/8	1	6 1/8	25/32	6 1/8	966D
967A	11/16	3/8	—	—	—	1 1/8	6 1/8	25/32	6 1/8	967A
967D	3/4	—	1/2	1/2	7/16	1 1/8	6 3/16	25/32	6 1/8	967D
968A	25/32	7/16	—	—	—	1 1/4	7	7/8	7	968A
968D	13/16	—	9/16	—	1/2	1 1/4	7	7/8	7	968D
969A	7/8	1/2	5/8	9/16	9/16	1 1/4	7 3/32	7/8	7	969A
970S	15/16	9/16	—	5/8	—	1 1/2	7 7/8	1 1/16	7 7/8	970S
970D	1	—	3/4	—	5/8	1 1/2	8	1 1/16	7 7/8	970D
971A	1 1/16	5/8	—	3/4	—	1 5/8	8 5/8	1 1/4	8 5/8	971A
971D	1 1/8	—	7/8	—	3/4	1 5/8	8 5/8	1 1/4	8 5/8	971D
973A	1 1/4	3/4	*1	7/8	—	1 7/8	9 5/16	1 1/4	9 1/8	973A
973B	1 5/16	—	1	—	7/8	1 7/8	9 5/16	1 1/4	9 1/8	973B
975A	1 7/16	7/8	—	1	—	2 1/8	10	1 7/16	10	975A
975D	1 1/2	—	1 1/8, *1 1/4	—	1	2 1/8	10	1 7/16	10	975D
976A	1 5/8	1	—	1 1/8	—	2 1/2	10 7/8	1 5/8	10 7/8	976A
976B	1 11/16	—	1 1/4	—	1 1/8	2 1/2	10 7/8	1 5/8	10 7/8	976B
977A	1 13/16	1 1/8	—	1 1/4	—	2 1/2	11 3/16	1 5/8	10 7/8	977A
978A	2	1 1/4	—	1 3/8	—	2 3/4	11 3/4	1 13/16	11 3/8	978A

†American Standard Machine Screw and Stove Bolt Nuts.

*Old Style Cap Screw — Now Obsolete.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.



Made from Carbon Steel to Billings' specifications, forged, opening broached, surface shot-blasted and black lacquered, hardened, face bright. The design of each size is such that proper leverage is assured because of correct proportion of the handle to the shank.

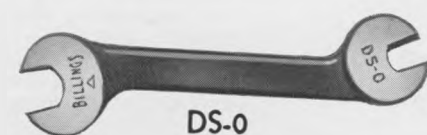
SQUARE OPENING CARBON STEEL

FINISH — BLACK LACQUERED — FACE BRIGHT

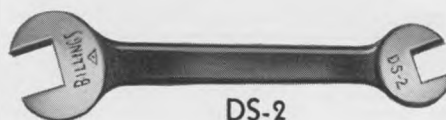
No.	Nominal Opening	SQUARE OPENING			Diameter of Head	Length (App.)	Size of Hex on Handle End	Length of Pin Handle	No.
		Amer. Std. Heavy Nut (USS) Size Bolts	Set Screw Size	Amer. Std. Reg. Nut Size Bolts					
961H	3/16	—	3/16	—	1/2	3 15/16	13/32	4	961H
961 J	1/4	—	1/4	—	1/2	4	13/32	4	961 J
962H	5/16	—	5/16	—	5/8	4 7/16	1/2	4 1/2	962H
963H	3/8	—	3/8	—	3/4	5 3/16	19/32	5	963H
965H	7/16	—	7/16	1/4	7/8	5 11/16	11/16	5 3/4	965H
966H	1/2	1/4	1/2	—	1	6	25/32	6 1/8	966H
967H	9/16	—	9/16	5/16	1 1/8	6	25/32	6 1/8	967H
968H	5/8	—	5/8	3/8	1 1/4	6 7/8	7/8	7	968H
968P	11/16	3/8	—	—	1 1/4	6 7/8	7/8	7	968P
969H	3/4	—	3/4	7/16	1 1/2	7 11/16	1 1/16	7 7/8	969H
971H	7/8	1/2	7/8	9/16	1 5/8	8 1/2	1 1/4	8 5/8	971H
973H	1	—	1	5/8	1 7/8	9 1/8	1 1/4	9 1/8	973H
974H	1 1/8	—	1 1/8	3/4	2 1/8	9 13/16	1 7/16	10	974H
976H	1 1/4	3/4	1 1/4	—	2 1/8	9 13/16	1 7/16	10	976H
977X	1 7/16	7/8	—	—	2 1/2	10 11/16	1 5/8	10 7/8	977X
977P	1 1/2	—	1 1/2	1	2 3/4	11 3/16	1 13/16	11 3/8	977P

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

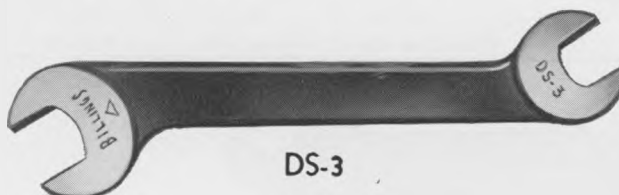
Billings' Carbon Steel Textile wrenches designed especially for use on looms, drop forged from special analysis carbon steel which is produced to rigid specifications. Openings are milled or broached, surfaces and edges smooth, heads bright and clearly stamped showing class number, size and trade-mark, hardened and finished with black crackle enamel baked on to provide greater protection for the wrench, better gripping qualities to the handle, and a maximum resistance to wear. These wrenches will tend to minimize time spent in adjustments and repairs.



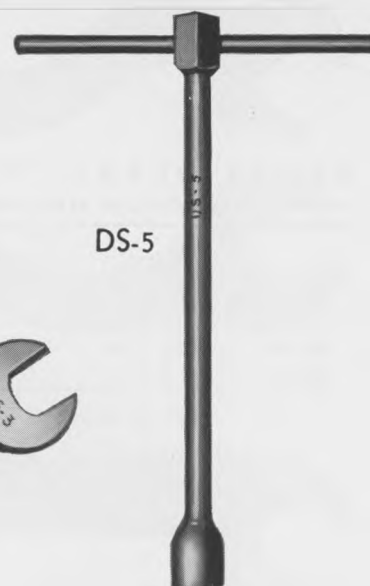
DS-0



DS-2



DS-3



DS-5

CARBON STEEL — DRAPER LOOM**FINISH — BLACK CRACKLE ENAMEL WITH BRIGHT HEADS**

No.	Nominal Openings	Amer. Std. Hex Head Cap Screw Dia. Screw	Set Screw Size	Length Approx.	Thickness of Head	No.
DS-0	3/8 & 9/16	†10 & 3/8	— & —	4 1/2	1/4	DS-0
DS-2	3/8 & 1/2	†10 & 5/16	3/8 & 1/2	5	5/16	DS-2
DS-3	5/8 & 3/4	7/16 & 1/2	— & —	7	13/32	DS-3
DS-5	3/8	— & —	3/8	7 3/4	3/4*	DS-5

†American Standard Machine Screw and Stove Bolt Nuts.

*Diameter of Head — Finish, black lacquered.

Billings "Vitalloy" **TEXTILE**

Billings' Vitalloy® wrenches drop forged from special analysis steel, resulting in a product of greater strength, lighter weight, and with the best of wearing qualities.

**DRAPER LOOM
"T" HANDLE SOCKET****FINISH — HEAVY CHROME PLATE OVER COPPER AND NICKEL**

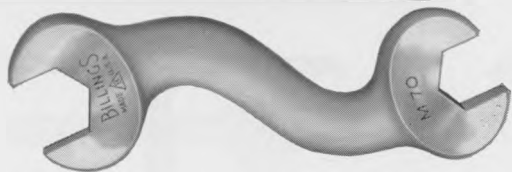
No.	Nominal Opening	Set Screw Size	Length of Shank	Diameter of Shank	Length of Pin Handle	No.
DS-6M	1/2	1/2	28	5/8	12	DS-6M

Especially designed for hard-to-get-at nuts. A time and knuckle saver for making adjustments and repairs on textile and other types of machinery.

**SQUARE OPENING**

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

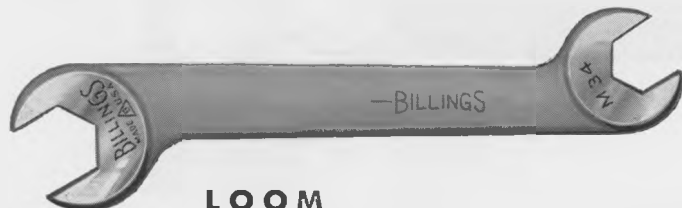
®Trade Mark Registered



SHORT HEAVY "S"

FINISH — HEAVY CHROME PLATE OVER COPPER AND NICKEL — HEADS POLISHED BRIGHT

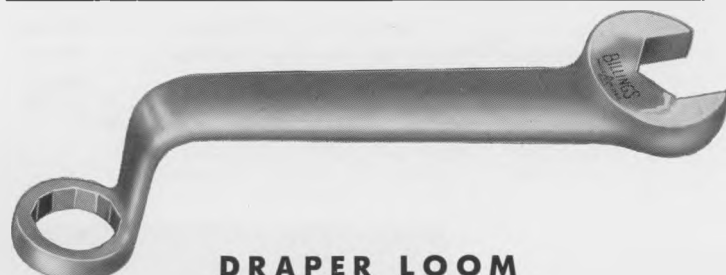
No.	Nominal Openings	Amer. Std. Heavy Nut (USS) Size Bolts	Amer. Std. Hex Head Cap Screws Dia. Screws	Amer. Std. Light Nut (SAE) Size Bolts	Amer. Std. Reg. Nut Size Bolts	Length (App.)	Thick-ness of Heads	No.
M-70	3/8 & 7/16	— & —	— & 1/4	— & 1/4	†10 & †12, 1/4	4 1/16	7/32	M-70
M-71	1/2 & 9/16	1/4 & —	5/16 & 3/8	5/16 & 3/8	— & 5/16	4 13/16	9/32	M-71



LOOM

FINISH — HEAVY CHROME PLATE OVER COPPER AND NICKEL — HEADS POLISHED BRIGHT

No.	Nominal Openings	Amer. Std. Heavy Nut (USS) Size Bolts	Amer. Std. Hex Head Cap Screws Dia. Screws	Amer. Std. Light Nut (SAE) Size Bolts	Amer. Std. Reg. Nut Size Bolts	Length (App.)	Thick-ness of Heads	No.
M-34	5/8 & 3/4	— & —	7/16 & 1/2	7/16 & 1/2	3/8 & 7/16	7	3/8	M-34



DRAPER LOOM

FINISH — HEAVY CHROME PLATE OVER COPPER AND NICKEL — HEADS POLISHED BRIGHT

No.	Box Open Head Head Nominal Openings	Amer. Std. Heavy Nut (USS) Size Bolts	Amer. Std. Hex Head Cap Screws Dia. Screws	Amer. Std. Light Nut (SAE) Size Bolts	Amer. Std. Reg. Nut Size Bolts	Length (App.)	Thick-ness of Heads	No.
DS4-M	3/4 & 7/8	— & 1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	7 1/4	11/32	DS4M



45° LONG — DS-8



45° SHORT — DS-7

BOX - DOUBLE HEX - HEAVY TYPE

FINISH — HEAVY CHROME PLATE OVER COPPER AND NICKEL — HEADS POLISHED BRIGHT

No.	Nominal Openings	Amer. Std. Heavy Nut (USS) Size Bolts	Amer. Std. Hex Head Cap Screws Dia. Screws	Amer. Std. Light Nut (SAE) Size Bolts	Amer. Std. Reg. Nut Size Bolts	Length (App.)	No.
DS-7	5/8 & 3/4	— & —	7/16 & 1/2	7/16 & 1/2	3/8 & 7/16	6 1/2	DS-7
DS-8	3/4 & 7/8	— & 1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	10	DS-8

†American Standard Machine Screw and Stove Bolt Nuts.

® Trade Mark Registered

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.





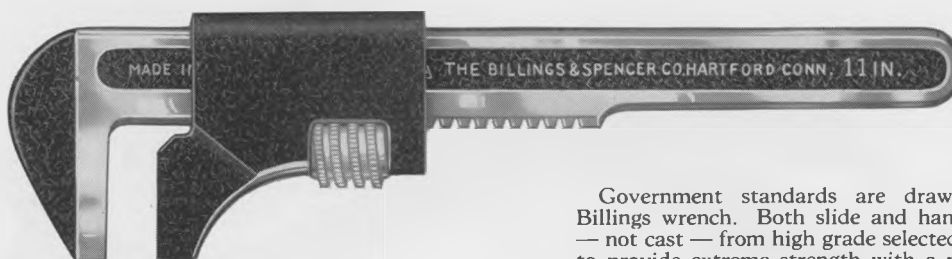
**22½° ANGLE
LONG LEVERAGE
CARBON STEEL**

Made from CARBON STEEL to Billings Specifications, drop forged, openings milled or broached, surface shot-blasted, hardened, heads not bright, natural rust-proof finish.

FINISH — HARDENED — NATURAL RUSTPROOF

No.	Milled Openings (Nominal)	Amer. Std. Heavy Nut (USS) Size Bolts	Amer. Std. Reg. Nut Size Bolts	Length	Thickness Heads	No.
367A	5/8 & 13/16	— & —	3/8 & 1/2	12	7/16	367A
367	11/16 & 7/8	3/8 & 1/2	— & 9/16	12	7/16	367
370C	13/16 & 7/8	— & 1/2	1/2 & 9/16	19	1/2	370C
370A	13/16 & 1	— & —	1/2 & 5/8	19	1/2	370A
370	7/8 & 1 1/16	1/2 & 5/8	9/16 & —	19	1/2	370
370B	1 & 1 1/8	— & —	5/8 & 3/4	19	1/2	370B
372A	1 1/16 & 1 1/4	5/8 & 3/4	— & —	20	9/16	372A
373	1 1/8 & 1 5/16	— & —	3/4 & 7/8	20	9/16	373
376A	1 1/4 & 1 7/16	3/4 & 7/8	— & —	21	9/16	376A
376	1 5/16 & 1 1/2	— & —	7/8 & 1	21	9/16	376
378A	1 7/16 & 1 5/8	7/8 & 1	— & —	22	5/8	378A
379	1 1/2 & 1 11/16	— & —	1 & 1 1/8	22	5/8	379
382A	1 5/8 & 1 13/16	1 & 1 1/8	— & —	23	5/8	382A
382	1 11/16 & 1 7/8	— & —	1 1/8 & 1 1/4	23	5/8	382
383B	1 7/8 & 2 1/4	— & —	1 1/4 & 1 1/2	24	5/8	383B
385	1 13/16 & 2	1 1/8 & 1 1/4	— & —	24	5/8	385
389	2 & 2 3/8	1 1/4 & 1 1/2	— & —	24	3/4	389
389B	2 3/16 & 2 3/8	1 3/8 & 1 1/2	— & —	24	3/4	389B

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.



MODEL "G" CARBON STEEL

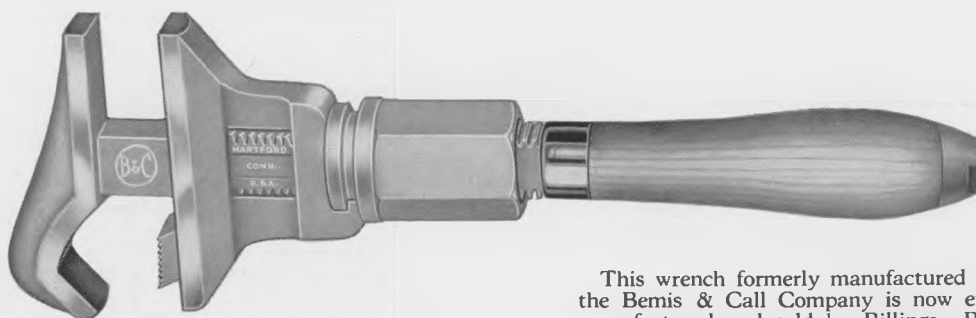
FINISH — BLACK CRACKLE ENAMEL AND POLISHED EDGES

Government standards are drawn up around this Billings wrench. Both slide and handle are drop forged — not cast — from high grade selected steels, heat treated to provide extreme strength with a minimum of weight. The movable jaw will not bind but is carefully machined to minimize play and the jaws are held rigidly parallel at all times.

No.	Length (App.)	Open Inches	Thickness of Jaw Inches	Depth of Jaw Inches	No.
9	9	2 5/8	3/8	1 1/4	9
11	11	3	7/16	1 1/2	11
15	15	3 5/8	9/16	1 3/4	15

LIST OF PARTS

Handle Sliding Jaw Knurl Screw



CARBON STEEL NO. 44 COMBINATION PIPE AND NUT

This wrench formerly manufactured and marketed by the Bemis & Call Company is now exclusively owned, manufactured and sold by Billings. Provides a strong, serviceable combination nut and pipe wrench, and is efficient in either capacity, thereby doing the job of two wrenches. The nut is designed to speed adjustment and provide a good grip in tightening the jaws on work; the pipe grip is of selected steel hardened; the head, bar and shank are forged in one piece. The lower jaw is movable to allow proper pipe wrench action, but this does not affect the use of the wrench on a nut or bolt.

FINISH — NATURAL — RUSTPROOF

No.	Size Inches	Open Inches	For Pipe Size	No.
44	15"	3 3/8	1/4 & 1 1/4	44

LIST OF PARTS

Bars
Pipe Dogs
Slides with Dogs
Tips or Ferrules

Sleeves or Long Nuts
Wood Handles,
including Tips and Ferrules

In ordering extra parts, always give length of wrench for which parts are wanted.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

BILLINGS VITALLOY® FORGED WRENCHES

OPEN END ADJUSTABLE

BILLINGS VITALLOY® FORGED Adjustable Wrenches are light weight, have thin matched tapered jaws and perfect balance. They are drop forged from special analysis alloy steel produced to Billings' rigid specifications. These wrenches are leaders in the adjustable field, having greater strength, durability and eye appeal. The thin tapered jaws make it possible to use this wrench in places inaccessible to ordinary wrenches, yet they have such strength that they will withstand extraordinary pressure without binding or distorting. The movable jaw with its wide bearing surface rests firmly on the frame. This results in greater support in any operating position, especially when the wrench is opened to its full capacity.

NO. 77 SERIES

SPECIFICATIONS — CHROME PLATED — HEADS POLISHED

Size	Capacity in Inches	THICKNESS OF HEAD		Weight Each
		Tip of Jaws	Extreme	
4"	1/2	1/8	5/16	1 1/2 oz.
6"	3/4	3/16	3/8	4 oz.
8"	15/16	15/64	15/32	8 oz.
10"	1 1/8	9/32	9/16	13 oz.
12"	1 5/16	11/32	11/16	1 lb. 7 oz.

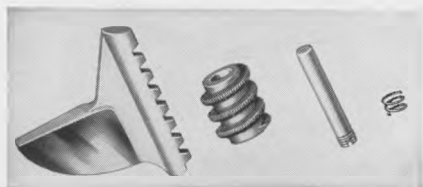
Individually boxed — Clearly labelled

NO. 77 SERIES

LIST PRICES

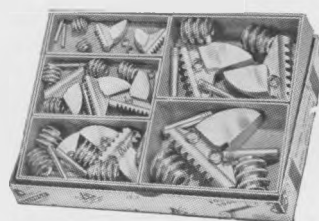
Size	Each	Dozen	Wt. Per Doz.
4"	\$1.80	\$21.60	1 lb. 2 oz.
6"	1.80	21.60	3 lb.
8"	2.11	25.32	6 lb.
10"	2.65	31.80	9 lb. 12 oz.
12"	3.97	47.64	17 lb. 4 oz.

REPLACEMENT PARTS



Size	Jaws	Knurls	Pins	Springs
4"	\$.42	\$.16	\$.07	\$.07
6"	.42	.16	.07	.07
8"	.52	.19	.07	.07
10"	.69	.21	.07	.07
12"	1.03	.35	.14	.07

LIST PRICES



REPLACEMENT PARTS ASSORTMENT A-53
Packed in distinctive Billings Metal edge box — 53 parts as follows:

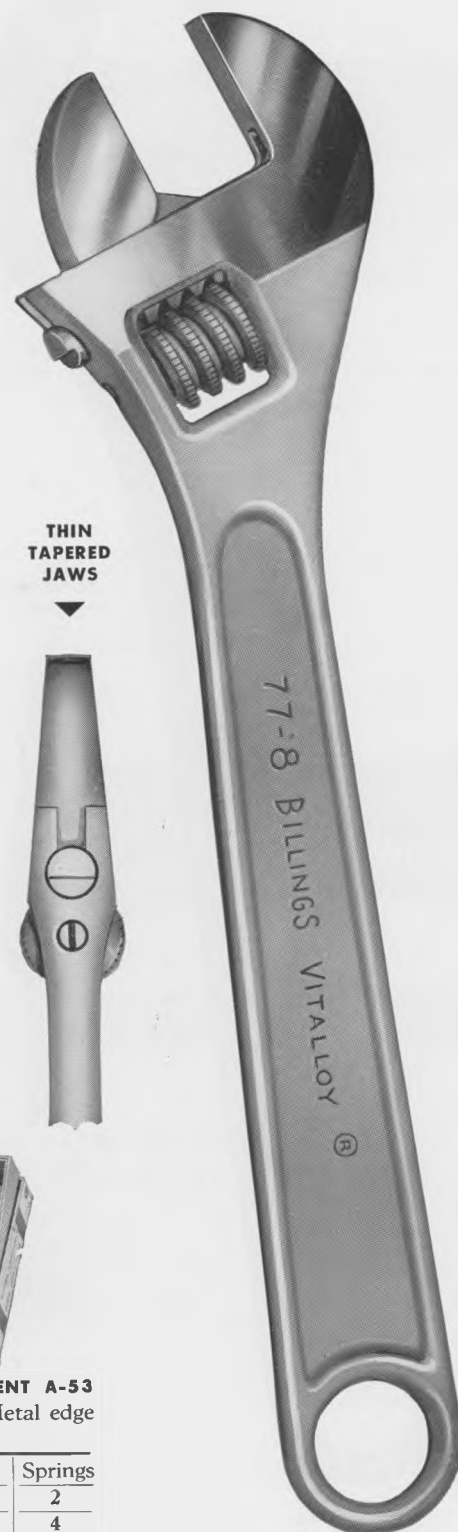
Size	Jaws	Knurls	Pins	Springs
4"	2	2	2	2
6"	3	4	4	4
8"	3	4	4	4
10"	2	2	2	2
12"	1	2	2	2

List Price, Complete \$11.01

See Page 62B for Billings Carbon Steel Adjustable Wrenches

open end **ADJUSTABLE**

**DROP FORGED
VITALLOY® STEEL**



8" WRENCH
ACTUAL SIZE

® Trade Mark Registered

BILLINGS

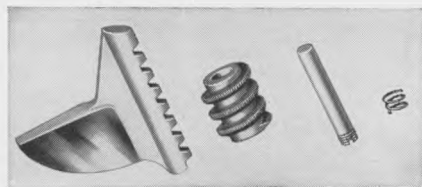
VITALLOY
Trade Mark Registered

WRENCHES

62-A

ADJUSTABLE open end**DROP FORGED
CARBON STEEL****ACTUAL SIZE
8" WRENCH**

® Trade Mark Registered

**THIN
TAPERED
JAWS**

Size	Jaws	Knurls	Pins	Springs
4"	\$.42	\$.16	\$.07	\$.07
6"	.42	.16	.07	.07
8"	.52	.19	.07	.07
10"	.69	.21	.07	.07
12"	1.03	.35	.14	.07

BILLINGS CARBON STEEL WRENCHES

OPEN END ADJUSTABLE

BILLINGS' CARBON STEEL Adjustable Wrenches are drop forged from special analysis tool steel produced to Billings' specifications. They have thin tapered jaws and are light in weight. Greater strength is obtained through scientific design and accurately controlled heat treatment. These wrenches are of the usual Billings' high quality that is outstanding in the wrench field.

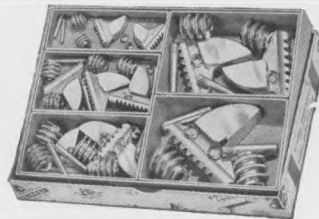
NO. 78 SERIES**SPECIFICATIONS — BLACK FINISH — HEADS POLISHED**

Size	Capacity in Inches	THICKNESS OF HEAD		Weight Each
		Tip of Jaws	Extreme	
4"	1/2	1/8	5/16	1 1/2 oz.
6"	3/4	3/16	3/8	4 oz.
8"	15/16	15/64	15/32	8 oz.
10"	1 1/8	9/32	9/16	13 oz.
12"	1 5/16	11/32	11/16	1 lb. 7 oz.

Individually boxed — Clearly labelled

NO. 78 SERIES**LIST PRICES**

Size	Each	Dozen	Wt. Per Doz.
4"	\$1.38	\$16.56	1 lb. 2 oz.
6"	1.38	16.56	3 lb.
8"	1.72	20.64	6 lb.
10"	2.07	24.84	9 lb. 12 oz.
12"	3.20	38.40	17 lb. 4 oz.

REPLACEMENT PARTS**LIST PRICES**

REPLACEMENT PARTS ASSORTMENT A-53
Packed in distinctive Billings Metal edge box — 53 parts as follows:

Size	Jaws	Knurls	Pins	Springs
4"	2	2	2	2
6"	3	4	4	4
8"	3	4	4	4
10"	2	2	2	2
12"	1	2	2	2

List Price, Complete \$11.01

See Page 62A for Billings Vitalloy® Steel Adjustable Wrenches





CARBON STEEL NO. 91 STEEL HANDLE

Genuine Coes wrench now manufactured and marketed by Billings. An acknowledged leader for decades in its field. Bar drop forged from selected steel, parts machined to precise fit, quality and workmanship unsurpassed. Steel handle provides for longer wear and hard and rough usage.

FINISH — NATURAL RUSTPROOF

Number	Size Inches	Open Inches
91	10"	1 3/4
91	12"	2 1/4
91	15"	2 5/8
91	18"	3
91	21"	4 1/8

LIST OF PARTS
Slides, Bars and Screws.

steel handle railroad **MONKEY WRENCH**



CARBON STEEL NO. 90 STEEL HANDLE

This wrench now owned, produced and marketed by Billings is ideally adapted for railroad, mining and industrial usage. It is of simple design, rugged construction, and consists of only three parts.

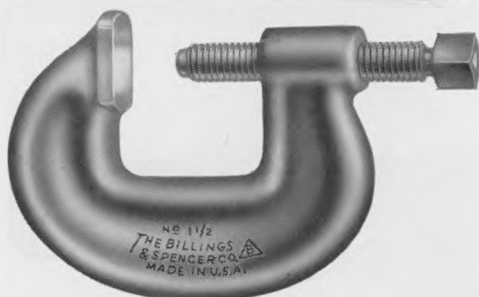
FINISH — NATURAL RUSTPROOF

Number	Size Inches	Open Inches
90	10"	1 3/4
90	12"	2 1/4
90	15"	3
90	18"	4
90	21"	5

LIST OF PARTS
Slides, Short Nuts and Bars

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

"C" CLAMPS



Designed for heavy duty — extra heavy throughout. The I-beam section gives maximum strength without excessive weight, heat treated to provide additional strength and minimize springing. Known by the trade as the strongest, highest grade and most reliable clamp on the market. Screws threaded U. S. Std. machined from carefully selected high grade steel, hardened and tempered.

Clamps with Standard Screws will be furnished unless otherwise specified. No. 1 1/2 to 12 Clamps can be furnished with long screws, the minimum capacity of which will be 0.

MODEL A — HEAVY DUTY

CARBON STEEL

FINISH — NATURAL RUSTPROOF

No.	Capacity		Depth of Throat Center of Screw	EXTREME DIMENSIONS OF BODY		STANDARD SCREW		No.
	Maximum	Minimum with Std. Screw		Length	Width	Diameter	Length Under Head	
0	3/4	0	3/4	2 1/4	1 15/16	5/16	1 5/8	0
1	1 1/4	0	1	3 3/16	2 17/32	3/8	2 1/4	1
1 1/2	1 3/4	11/16	1 1/2	4 1/2	3 5/8	1/2	2 1/2	1 1/2
2	2 1/4	7/8	1 3/4	5 3/4	4 7/16	5/8	3	2
3	3 1/4	1 5/16	2 3/8	7 7/16	5 11/16	3/4	4	3
4	4 1/2	2	2 13/16	9 1/8	6 7/16	7/8	4 3/4	4
5	5 1/2	2 1/2	3 1/8	10 5/8	7 5/16	7/8	5 1/2	5
6	6 1/2	3 1/16	3 3/8	12 3/16	8 1/16	1	6 1/8	6
8	8 1/2	4 1/4	3 5/8	14 11/16	8 13/16	1 1/8	7 1/4	8
10	10 1/2	6 3/8	4	17 1/4	9 11/16	1 1/8	7 1/4	10
12	12 1/2	7 5/8	4 1/2	20 1/16	11 1/4	1 1/4	8 1/4	12



Design of this medium duty clamp provides for greater utility. Although lighter in weight than the heavy duty, it can be used as a general service clamp providing the required strength with a minimum of weight. It is drop forged of selected steel and heat treated. Regarded by the trade as the strongest medium duty or general service clamp marketed. These clamps have adjustable handles and the screws are threaded U. S. Std. machined from carefully selected high grade steel, hardened and tempered.

MODEL GS — MEDIUM DUTY

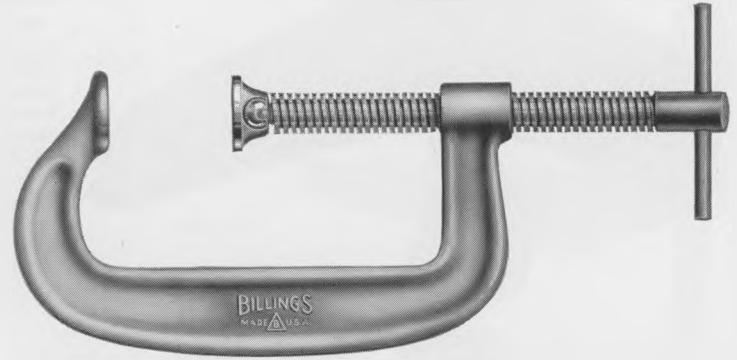
CARBON STEEL

FINISH — NATURAL RUSTPROOF

No.	Capacity		Depth of Throat from Center of Screw	EXTREME DIMENSIONS OF BODY		SCREW		SIZE HANDLE		No.
	Max.	Min.		Length	Width	Diam.	Length with Swivel	Diam.	Length	
104	4	0	2 3/8	8 5/8	5 1/16	3/4	6 3/4	3/8	6 1/2	104
106	6	1 3/4	2 3/4	10 5/8	5 5/8	3/4	6 3/4	3/8	6 1/2	106
108	8	3 3/4	3 1/8	12 7/8	6 1/8	3/4	6 3/4	3/8	6 1/2	108
110	10	5 3/4	3 1/2	15 1/8	6 5/8	3/4	6 3/4	3/8	6 1/2	110
112	12	8	3 7/8	17 1/2	7 3/16	3/4	6 3/4	3/8	6 1/2	112
115	15	9 3/4	4 1/4	20 13/16	7 3/4	7/8	8 1/4	7/16	8	115
118	18	13	4 1/2	24 5/16	8 1/4	7/8	8 1/4	7/16	8	118

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

Completely cadmium plated to minimize adherence of welding spatter. Deep throats to provide ample clearance on such applications as body building, welding, etc. Drop forged from high grade steel, heat treated, screws having a special stub thread for strength and rapid adjustment.



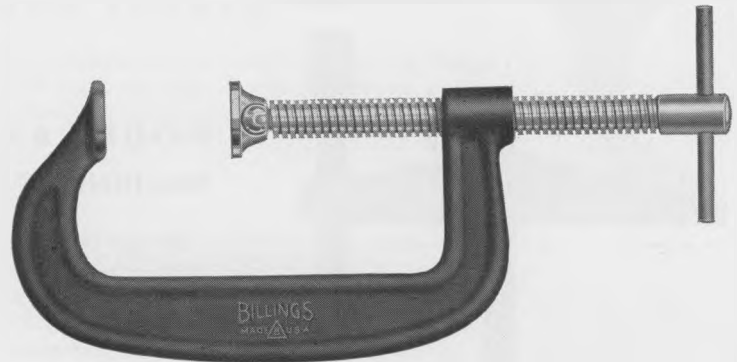
MODEL SR

FINISH — CADMIUM PLATED

CARBON STEEL
SPATTER RESISTING, DROP FORGED

No.	Capacity		Depth of Throat From Center of Screw	EXTREME DIMENSIONS OF BODY		SCREW		No.
	Max.	Min.		Length	Width	Diam.	Length Overall	
402-S	2	0	2	4 7/8	3 3/8	1/2	4 7/8	402-S
403-S	3	0	2 5/16	6 5/16	4 1/4	1/2	6 1/8	403-S
404-S	4	0	2 3/8	7 1/2	4 1/2	5/8	7 7/16	404-S
406-S	6	0	3 3/4	10 1/8	5 7/8	5/8	9 9/16	406-S
408-S	8	0	4 3/4	12 7/8	7 1/8	3/4	12 7/16	408-S
410-S	10	2	5 1/4	15 9/16	8 1/4	3/4	12 7/16	410-S
412-S	12	3	5 3/4	18	9 3/8	7/8	13 7/8	412-S

Especially designed for body building, woodworking and other applications where light duty clamps having deep throats for clearance are required. Drop forged from high grade steel, heat treated, screws threaded with special stub thread for strength and rapid adjustment.



MODEL BB

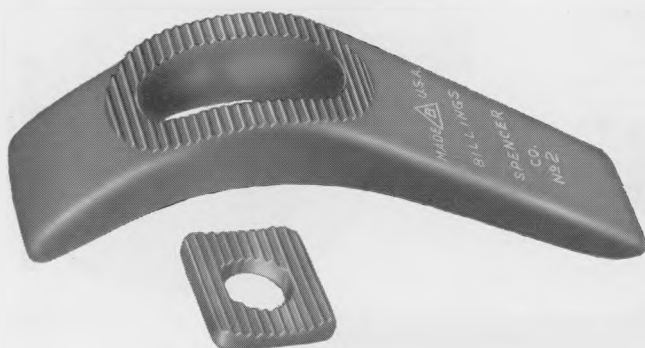
FINISH — NATURAL RUSTPROOF

CARBON STEEL
"Body Builders — Deep Throat"

No.	Capacity		Depth of Throat From Center of Screw	EXTREME DIMENSIONS OF BODY		SCREW		No.
	Max.	Min.		Length	Width	Diam.	Length Overall	
402	2	0	2	4 7/8	3 3/8	1/2	4 7/8	402
403	3	0	2 5/16	6 5/16	4 1/4	1/2	6 1/8	403
404	4	0	2 3/8	7 1/2	4 1/2	5/8	7 7/16	404
406	6	0	3 3/4	10 1/8	5 7/8	5/8	9 9/16	406
408	8	0	4 3/4	12 7/8	7 1/8	3/4	12 7/16	408
410	10	2	5 1/4	15 9/16	8 1/4	3/4	12 7/16	410
412	12	3	5 3/4	18	9 3/8	7/8	13 7/8	412

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

CLAMPS universal adjustable strap

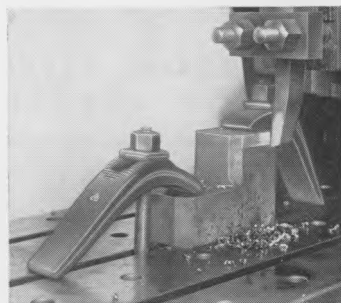


UNIVERSAL ADJUSTABLE STRAP CLAMPS DROP FORGED — HARDENED

Drop forged from selected carbon steel — hardened — one clamp for many types of work — designed for holding work in planers, boring mills, drill presses, face plates of lathes, milling machines and other applications too numerous to mention. Its design permits use on irregular shapes and varying sizes without blocks and shims, holding the work more securely than any other clamp on the market.

Owing to the changeable position of the saddle, tension between T-slot of the machine and the saddle (transmitted through tie-bolt) is always at right angles and perpendicular to the table of the machine.

This tool will prove a time and labor saver in all machine shops and tool rooms.

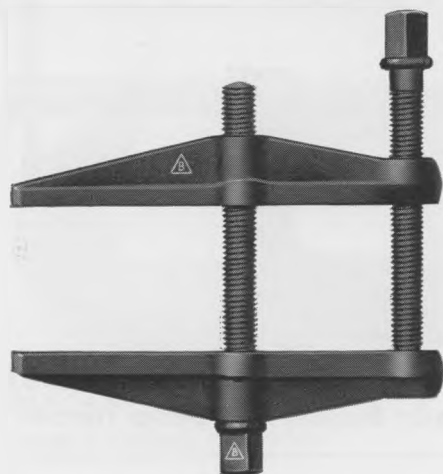


FINISH — NATURAL RUSTPROOF

CARBON STEEL

Clamp Number	1	2	3
Length Overall, inches	5 1/16	8	12
Width of Clamp	1 5/8	2 1/8	2 3/4
Adjustment, inches	2 1/4	4	6 1/4
Max. "T" Slot Bolt, size inches	5/8	3/4	1

CLAMPS machinists



MODEL AX MACHINISTS' DROP FORGED

Billings' Drop Forged Machinists' Clamps are made of carefully selected carbon steel, heat treated for maximum strength and to minimize the possibility of springing. Used extensively by tool makers, die sinkers, machinists and other craftsmen.

Screws threaded U. S. Standard.

FINISH — NATURAL RUSTPROOF

CARBON STEEL

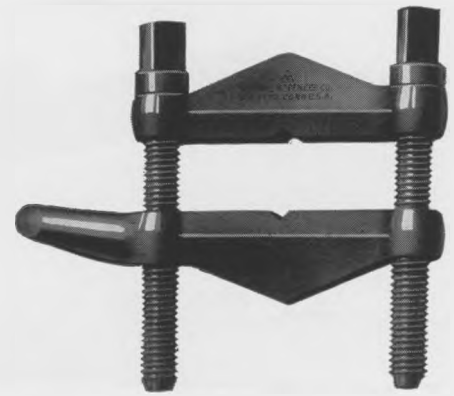
No.	Capacity		SCREWS				No.
	Maximum Opening	Length Jaw From Screw	END		CENTER		
			Diameter	Length	Diameter	Length	
301	1 1/4	2	5/16	2 3/4	5/16	2 3/4	301
302	2 1/4	2 1/2	3/8	3 11/16	3/8	3 11/16	302
303	3 1/4	3	7/16	5 5/16	7/16	5 5/16	303
304	4 1/4	3 1/2	1/2	6 7/16	1/2	6 7/16	304

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

A general purpose Parallel Clamp Dog indispensable in all well equipped tool cribs. Model AU is drop forged from selected carbon steel, heat treated to provide strength and proper rigidity. Extra screws for replacement are carried in stock.

FINISH — NATURAL RUSTPROOF**CARBON STEEL**

Number	Size Between Screws	SCREW		Number
		Length Under Head	Diameter	
1	1 7/8	2 9/16	5/16	1
2	2 1/4	2 7/8	3/8	2
3	2 3/4	4 1/16	7/16	3
4	3 1/2	5 3/16	9/16	4

**MODEL AU**

Models CK and AR, drop forged from selected carbon steel, are the choice of expert mechanics and a "must" in every tool crib.

single screw bent tail **LATHE DOGS****MODEL CK
SAFETY SCREW****MODEL AR
SQUARE HEAD SCREW****CARBON STEEL
DROP FORGED**

Bosses on the dogs are large enough to permit redrilling when the threads are worn out, thus doubling the life of the dogs. Openings machined at right angles with face. Safety screws and square head screws for each size are interchangeable, and are placed to get maximum gripping and even balance.

FINISH — NATURAL RUSTPROOF

Number	Capacity	SPECIFICATIONS SCREWS ONLY				Number
		SAFETY		SQUARE HEAD		
		Diameter	Extreme Length	Diameter	Length Under Head	
1	3/8	3/8	3/4	3/8	1 1/8	1
2	1/2	3/8	3/4	3/8	1 1/4	2
3	3/4	7/16	1	7/16	1 5/8	3
4	1	1/2	1 1/4	1/2	2	4
5	1 1/4	5/8	1 1/2	5/8	2 1/4	5
6	1 1/2	5/8	1 3/4	5/8	2 1/4	6
7	1 3/4	5/8	1 3/4	5/8	2 5/8	7
8	2	5/8	1 3/4	5/8	2 5/8	8
9	2 1/2	3/4	2 1/4	3/4	3 1/8	9
10	3	3/4	2 1/2	3/4	3 1/8	10
11	3 1/2	7/8	2 3/4	7/8	3 5/8	11
12	4	7/8	2 3/4	7/8	4 1/2	12
13	5	1	3	1	4 1/2	13

Unless otherwise specified, Model AR Dogs complete will be furnished.
All Model CK Lathe Dogs will be furnished with Safety Screw and Wrench.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

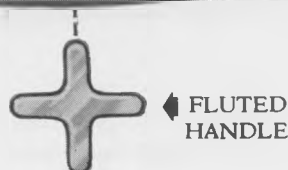
CARBON STEEL

BILLINGS' CARBON STEEL SCREW DRIVERS are drop forged from special analysis steel which is produced to rigid specifications, hardened, edges of handle flutes smooth, tapered blade ground and uniformly accurate to size.



MODEL P—DROP FORGED

This screw driver is designed for use in turning fillister head and machine cap screws. The shank is square to permit the use of a wrench when additional leverage is needed. For this purpose this screw driver is strongest at the tip where the peak strain is exerted. It has sufficient strength to be used as a pry bar as well.



FLUTED
HANDLE

FINISH — NATURAL RUSTPROOF AND RED LACQUER

Number	Length Overall, Inches	Length of Blade, Inches	Width of Blade, Inches	Size of Shank, Inches	Number
20 1/2	9	5	3/8	3/8	20 1/2
21	9 1/2	5	5/8	7/16	21
22	10 1/2	5	3/4	9/16	22

OFFSET SCREW DRIVER

CARBON STEEL



MODEL Z—DROP FORGED

FINISH — NATURAL RUSTPROOF

4 3/4 in. Long—5/16 in. Blade

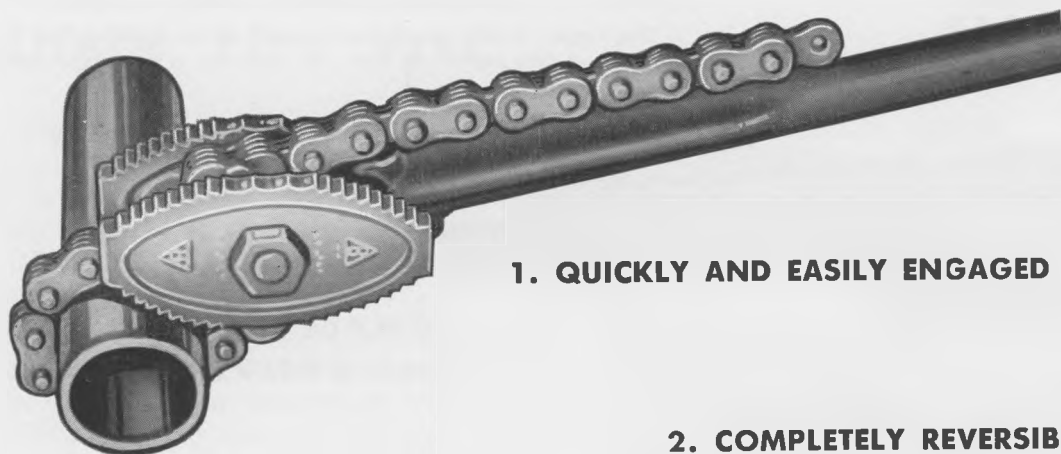
Drop Forged from BILLINGS' CARBON STEEL, this very practical tool finds countless uses in industry and in the home. In those places where the conventional type of driver cannot be used, the BILLINGS' OFFSET SCREW DRIVER will do the job quickly and well. The blades are concave and at right angles to each other — a double duty tool. A necessary addition to any tool box.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

Three Wrenches in One!

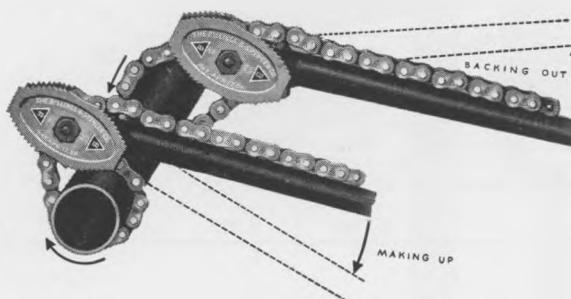
"red head"
reversible

CHAIN PIPE



1. QUICKLY AND EASILY ENGAGED

2. COMPLETELY REVERSIBLE



3. USED AS A FITTING WRENCH



BILLINGS' CARBON STEEL DROP FORGED "Red Head" Reversible CHAIN PIPE WRENCHES

THREE WRENCHES IN ONE

Three Wrenches in One! Without removing the wrench or loosening the chain, pipe may be turned, instantly, in either direction. This completely reversible feature of the Billings' "Red Head" is particularly valuable where a thread is crossed in making-up. No lost time in removing wrench.

The third "Three in One" feature — remove the outer jaws and the wrench becomes a perfect fittings wrench for narrow beads and flanges.

Doubling the life of the jaws is obtained by reversing them — they're double ended. To assure added strength and wearing qualities the side and center jaws as well as the chain connections are BILLINGS' VITALLOY® FORGED. The pins are of special analysis alloy steel.

The single bolt and nut used in assembly are standard and, in emergencies, are quickly and easily obtainable from local stores.

Billings' wrench engineers designed the "Red Head" with the usual Billings' safety factor built into it. Experi-

ments and field tests proved their design to have all the features demanded by oil field men, plumbers and steam fitters — (1) Safety (2) Reversibility (3) Simple construction (4) Durability — built for rugged jobs.

The wrench is a time-saver and a safe wrench to use when working on dangerous lines, such as live steam, gasses, ammonia, etc., where the operator must count on immediate response and the reverse action quick and sure.

The parts of the BILLINGS' "Red Head" Reversible Chain Pipe Wrench not already described are drop forged from BILLINGS' CARBON STEEL specially selected for its durability and strength, carefully machined and heat treated.

The design of the wrench is such that the working strain is distributed over the whole head thus increasing the life and efficiency on the rugged jobs for which it is intended. The BILLINGS' Chain Pipe Wrench combines all the experience of years of fine wrench making and is backed by the Billings' guarantee.

® Trade Mark Registered

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

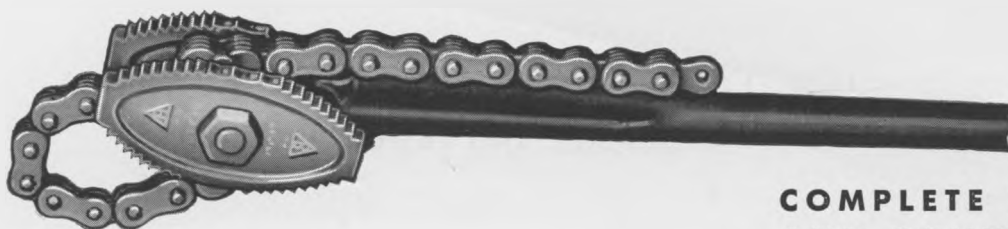
CHAIN PIPE

"red head"
reversible

CARBON STEEL DROP FORGED

BILLINGS' CARBON STEEL REVERSIBLE CHAIN PIPE WRENCH, drop forged from special analysis steel, heat treated and machined to the Billings' standard of quality. To assure further strength and wearing qualities the Side and Center Jaws, Chain Connections and the Pins in the Chain are BILLINGS' VITALLOY® FORGED.

This rugged wrench is explained in detail on the previous Page 69. Dimensional data and list of Parts, of assistance in ordering replacements, is shown below.

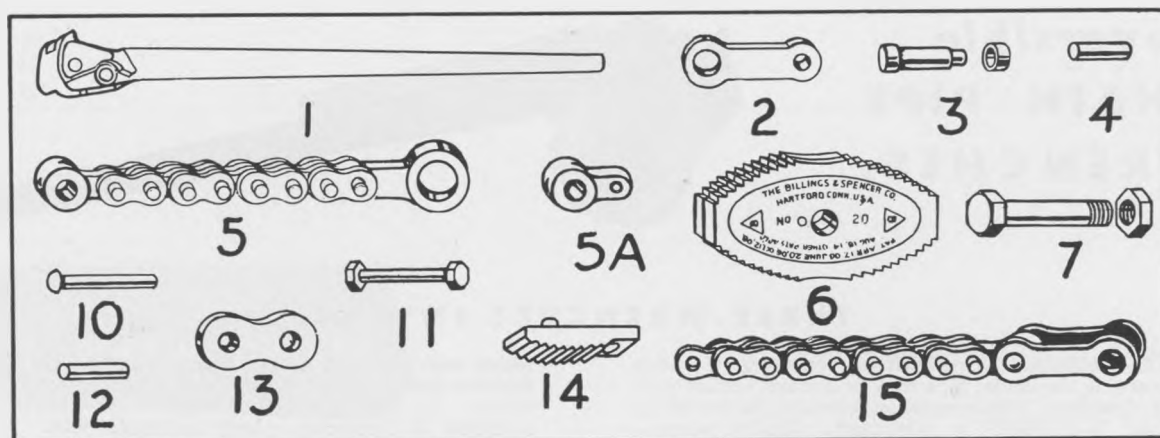


COMPLETE REVERSIBLE AND CONVERTIBLE

DIMENSIONAL DATA

Trade No.	31	32	33	33 1/2	34	35	—
B. & S. No.	20	27	37	47	57	67	87
Capacity, size pipe, inches	1/8 - 1 1/2	1/4 - 2 1/2	3/4 - 4	1 - 6	1 1/2 - 8	2 - 12	4 - 18
Length Overall, inches	20	27	37	44 1/2	50 1/2	64 1/2	87
Flat Link Chain, length, inches	12 1/2	16 1/2	20 3/4	30 1/4	36 3/8	53	78
Breaking Strain, lbs.	6,700	9,800	12,500	14,300	15,700	21,800	40,000

PARTS FOR WRENCHES No. 20 to 87 inclusive



ASSISTANCE IN ORDERING

When "chain" (No. 5) is ordered, chain and one chain connection for B & S double jaw, reversible chain pipe wrench and one universal connecting link for B & S and other makes of single jaw chain pipe wrenches of comparable size will be furnished. When "chain complete" (No. 15) is ordered, chain, chain connections, chain connecting rivet, two chain stirrup links and a pivot pin and washer will be furnished.

ORDER PARTS BY NUMBER AND SIZE OF WRENCH

1 Handle; 2 Chain Stirrup Link, each; 3 Pivot Pin and Washer, for Stirrup Link; 4 Chain Connection Rivet; 5 Chain and Chain Connections; 5A Chain Connection Only; 6 Side Jaws, per Pair; 7 Side Jaw Bolt and Nut; 10 Center Jaw Rivet; 11 Center Jaw Bolt and Nut; 12 Chain Pins; 13 Chain Links, Outside or Inside; 14 Center Jaw with Dowel Pin; 15 Chain Complete.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

Improved!

BILLINGS CARBON STEEL CHAIN PIPE VISE

CHAIN PIPE VISE

CARBON STEEL

Plumbers, Steam fitters, Oil Field workers, Utility maintenance groups and industry in general find the BILLINGS' Chain Pipe Vise a light weight, yet ruggedly constructed practical addition to their tool crib, stock room or warehouse.

The base of the vise and the handle are drop forged from BILLINGS' CARBON STEEL, the chain pins are BILLINGS' VITALLOY® STEEL and the side jaws are VITALLOY® FORGED from special analysis alloy steel which is produced to rigid specifications, tempered and heat treated.

The unique Billings' design contains definite advancements in vise construction. First: Elongated and knurled adjustment nut. The slack is taken out of the chain by quick finger adjustment without the use of the handle. The Billings' Chain Pipe Vise can then be securely locked by a quarter or half turn of the handle. Full turns on the handle, resulting in interference with the side of the bench, are not necessary.

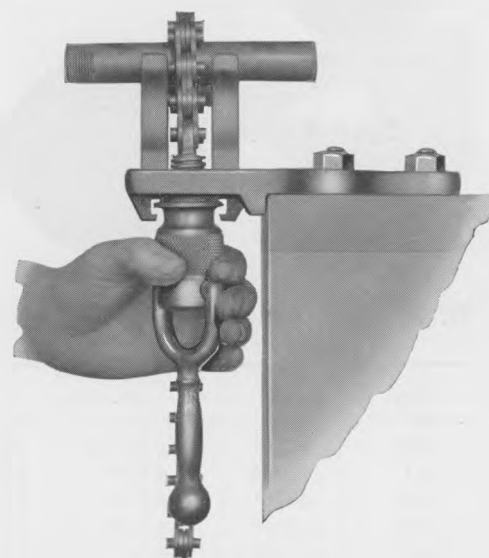
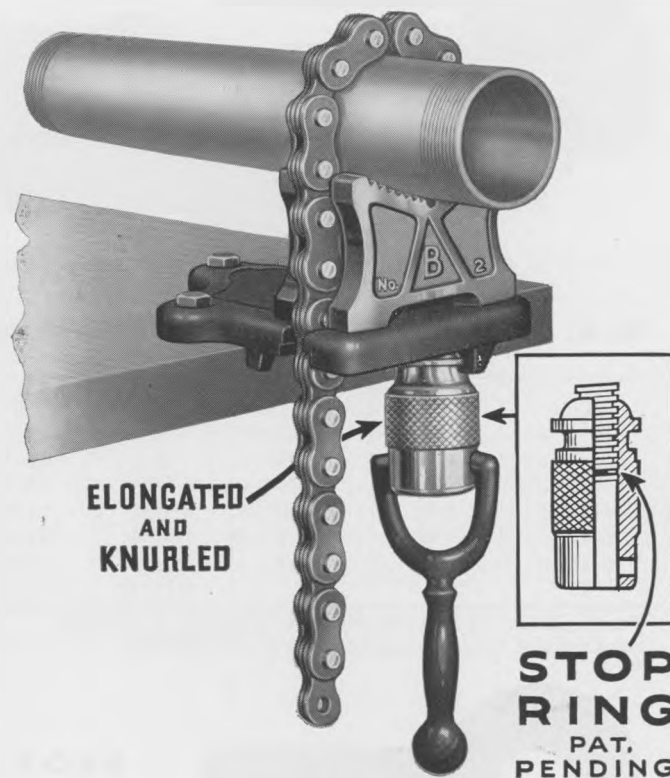
The Second improvement — BILLINGS' STOP RING. Placed at the end of the screw it prevents the elongated nut from becoming disengaged and lost, yet the nut may be easily removed when desired.

The vise is securely fastened to the work bench by three bolts or lag screws. It is made in four sizes and can be quickly identified by the bright red color jaw plates with the world renowned Billings' trade mark — Triangle B — embossed on each side.

HOLDING CAPACITY

1/8" to 8" Dia.

Number	Capacity For Pipe Sizes	Weight Lbs.
1	1/8 - 2	4
2	1/4 - 4	10
3	1/2 - 6	18
4	1/2 - 8	30

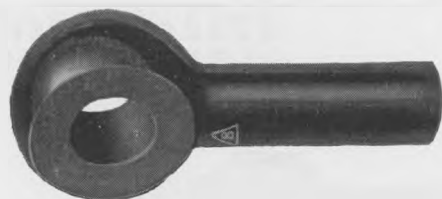


PLENTY OF SPACE BETWEEN
ADJUSTMENT NUT AND BENCH
A Billings Feature!

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

® Trade Mark Registered

ROD ENDS milled and drilled — blank



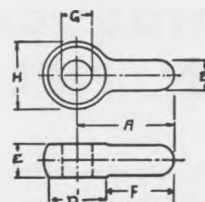
MILLED AND DRILLED

DROP FORGED

CARBON STEEL



BLANK



To meet the requirements of manufacturers of automobiles, tractors, motor boats, machinery, farm implements, electrical equipment and other users, the following sizes are carried in stock:

S. A. E. STANDARD Table of Finished Dimensions

Blanks are 1/16 inch thicker at head

No.	B	A	F	D	E	G	H	No.
71	1/4	1 1/4	1	1/2	9/32	1/4	5/8	71
72	5/16	1 3/8	1 5/64	19/32	11/32	5/16	23/32	72
73	3/8	1 1/2	1 5/32	11/16	7/16	3/8	7/8	73
74	7/16	1 1/2	1 3/32	13/16	1/2	7/16	1	74
75	1/2	1 3/4	1 9/32	15/16	9/16	1/2	1 1/8	75
76	5/8	2	1 13/32	1 3/16	11/16	5/8	1 13/32	76

Furnished two ways (1) Blanks only (2) Milled and Drilled.
See Discount Sheet for special prices in quantity lots.



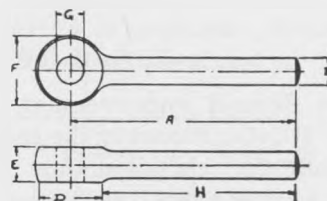
MILLED AND DRILLED

DROP FORGED

CARBON STEEL



BLANK



This line of rod ends is heavier, longer and larger throughout than the S. A. E. Standard Rod End. In addition the line includes sizes up to 1 inch diameter rods. They are admittedly the strongest rod ends offered to the trade.

B. & S. STANDARD Table of Finished Dimensions

Blanks are 1/16 inch thicker at head

No.	B	A	H	D	G	E	F	No.
0	1/4	3 15/16	3 19/32	11/16	5/16	5/16	3/4	0
1	5/16	4 1/16	3 21/32	13/16	5/16	3/8	29/32	1
2	3/8	4 1/4	3 13/16	7/8	3/8	7/16	31/32	2
3	7/16	4 7/16	3 15/16	1	7/16	1/2	1 3/32	3
4	1/2	4 5/8	4 1/16	1 1/8	1/2	9/16	1 1/4	4
5	9/16	4 13/16	4 3/16	1 1/4	9/16	5/8	1 3/8	5
6	5/8	5 3/16	4 7/16	1 1/2	5/8	3/4	1 21/32	6
7	3/4	5 9/16	4 11/16	1 3/4	3/4	7/8	1 15/16	7
8	7/8	6 3/32	5 3/32	2	7/8	1	2 3/16	8
9	1	6 1/2	5 3/8	2 1/4	1	1 1/8	2 15/32	9

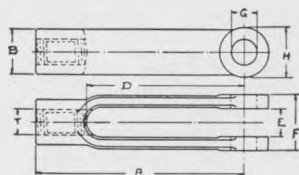
Furnished two ways (1) Blanks only (2) Milled and Drilled.
See Discount Sheet for special prices in quantity lots.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.



Drop forged from selected carbon steel — adequate strength and rigidity. Inspected before shipping to maintain the Billings' standard of quality forgings.

ADJUSTABLE TYPE CARBON STEEL



TAPPED, MILLED AND STUD HOLES DRILLED



BLANK

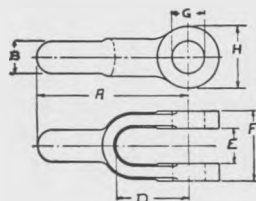
Table of Finished Dimensions S. A. E. STANDARD

No.	A	B	D	E	F	G	H	T	No.
50	1 9/16	5/16	1	3/16	7/16	3/16	3/8	#10 - 32 S. A. E. Std.	50
51	2	7/16	1 1/4	9/32	5/8	1/4	1/2	1/4 - 28 S. A. E. Std.	51
52	2 1/4	1/2	1 7/16	11/32	3/4	5/16	19/32	5/16 - 24 S. A. E. Std.	52
53	2 1/2	5/8	1 5/8	7/16	7/8	3/8	11/16	3/8 - 24 S. A. E. Std.	53
54	2 7/8	23/32	1 7/8	1/2	1	7/16	13/16	7/16 - 20 S. A. E. Std.	54
55	3	13/16	1 7/8	9/16	1 1/8	1/2	15/16	1/2 - 20 S. A. F. Std.	55
55 1/2	4 3/16	13/16	3 1/16	9/16	1 1/8	1/2	15/16	1/2 - 20 S. A. E. Std.	55 1/2
56	4 15/16	1 1/16	3 11/16	11/16	1 3/8	5/8	1 3/16	5/8 - 18 S. A. E. Std.	56

Furnished three ways (1) Blanks only (2) Milled and Stud Holes Drilled (3) Tapped, Milled and Stud Holes Drilled. See Discount Sheet for special prices in quantity lots. Prices on Studs furnished on request.

Drop forged from selected carbon steel — adequate strength and rigidity. Inspected before shipping to maintain the Billings' standard of quality forgings.

PLAIN TYPE CARBON STEEL



MILLED AND DRILLED



BLANK

Table of Finished Dimensions S. A. E. STANDARD

No.	A	B	D	E	F	G	H	No.
60	1 1/4	3/16	7/16	3/16	7/16	3/16	3/8	60
61	1 3/4	1/4	5/8	9/32	5/8	1/4	1/2	61
62	2	5/16	3/4	11/32	3/4	5/16	19/32	62
63	2 1/8	3/8	27/32	7/16	7/8	3/8	11/16	63
64	2 1/4	7/16	1	1/2	1	7/16	13/16	64
65	2 1/2	1/2	1 1/8	9/16	1 1/8	1/2	15/16	65
66	2 7/8	5/8	1 7/16	11/16	1 3/8	5/8	1 3/16	66
67	3 5/8	3/4	1 11/16	13/16	1 5/8	3/4	1 7/16	67

Furnished two ways (1) Blanks only (2) Milled and Stud Holes Drilled. See Discount Sheet for special prices in quantity lots. Automotive Type Yoke Ends other than above available in quantities on special order.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

CARBON STEEL — DROP FORGED

BILLINGS' CARBON STEEL EYE BOLTS are drop forged from special analysis steel, heat treated to further increase their strength and safety factor. Standard length, threaded U. S. Standard to within 1/8" - 3/8" of eye. Prices furnished on special threads upon request.

PLAIN PATTERN — STANDARD LENGTH BLANK OR THREADED

No.	SHANK		EYE DIAMETER		CAPACITY BLANKS Net Tons			No.
	Nominal Diam. Blank	Standard Length in Stock	Inside	Outside	Safe Working Load	Average Load at Elastic Limit	Breaking Strain (App.)	
40	1/4	1 3/8	1/2	7/8	.2	.5	1.5	40
41	5/16	1 7/8	9/16	1 1/16	.4	.9	2.	41
42	3/8	1 1/8	1 1/4	2	.7	1.4	3.	42
43	7/16	1 1/4	1 3/8	2 1/8	1.	2.	4.	43
44	1/2	1 7/16	1 1/2	2 3/8	1.3	2.5	5.	44
45	9/16	1 5/8	1 3/8	2 3/8	1.5	3.	6.	45
46	5/8	1 13/16	1 11/16	2 15/16	2.	4.	8.	46
47	3/4	2	1 13/16	3 5/16	3.	6.	12.	47
48	7/8	2 3/16	1 15/16	3 9/16	3.5	7.	16.	48
49	1	2 3/8	2 1/16	3 15/16	4.	8.	20.	49
49 1/2	1 1/8	2 1/2	2 3/16	4 5/16	5.	10.	23.	49 1/2
50	1 1/4	2 3/4	2 5/16	4 11/16	7.5	15.	33.	50
51	1 1/2	3 1/8	2 9/16	5 5/16	9.	18.	42.	51
52	1 3/4	3 1/2	3 1/16	6 1/16	11.	21.	53.	52
53	2	4	3 1/16	6 5/16	13.	25.	68.	53

Furnished two ways (1) Blanks only (2) Threaded. Threaded will be furnished unless otherwise ordered. See Discount Sheet for special prices in quantity lots.

SHOULDER PATTERN — STANDARD LENGTH BLANK OR THREADED

No.	SHANK		EYE DIAMETER		Shoulder Diam.	CAPACITY BLANKS Net Tons			No.
	Nominal Diam. Blank	Standard Length in Stock	Inside	Outside		Safe Working Load	Average Load at Elastic Limit	Breaking Strain (App.)	
58	1/4	1	9/16	1	1/2	.2	.5	1.5	58
59	5/16	1 1/8	7/8	1 7/16	9/16	.4	.9	2.	59
60	3/8	1 1/4	1 1/8	1 11/16	5/8	.7	1.4	3.	60
60A	7/16	1 3/8	1 3/32	1 27/32	13/16	1.	2.	4.	60A
61	1/2	1 7/16	1 1/4	2 3/8	7/8	1.3	2.5	5.	61
61A	9/16	1 5/8	1 9/32	2 9/32	1	1.5	3.	6.	61A
62	5/8	1 3/4	1 3/8	2 5/8	1	2.	4.	8.	62
63	3/4	2 1/8	1 1/2	3	1 1/8	3.	6.	12.	63
64	7/8	2 1/2	1 5/8	3 1/4	1 1/4	3.5	7.	16.	64
65	1	3 1/4	1 7/8	3 5/8	1 1/2	4.	8.	20.	65
66	1 1/8	2 3/4	2	4	1 11/16	5.	10.	23.	66
67	1 1/4	3	2 3/16	4 7/16	1 13/16	7.5	15.	33.	67
68	1 1/2	3 1/2	2 1/2	5 3/16	2 3/16	9.	18.	42.	68

Furnished two ways (1) Blanks only (2) Threaded. Threaded will be furnished unless otherwise ordered. See Discount Sheet for special prices in quantity lots.

CABLE PATTERN — STANDARD LENGTH BLANK OR THREADED

No.	SHANK		EYE DIAMETER		No.
	Nominal Diameter	Length	Inside	Outside	
70	1/2	5 3/8	1/2	1 3/8	70
71	5/8	3 1/2	5/8	1 5/8	71
72	3/4	4 1/2	1	2 1/4	72

Furnished two ways (1) Blanks only (2) Threaded. Threaded will be furnished unless otherwise ordered. See Discount Sheet for special prices in quantity lots. Other sizes and types available in quantities — information on request.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

**CARBON STEEL
DROP FORGED**

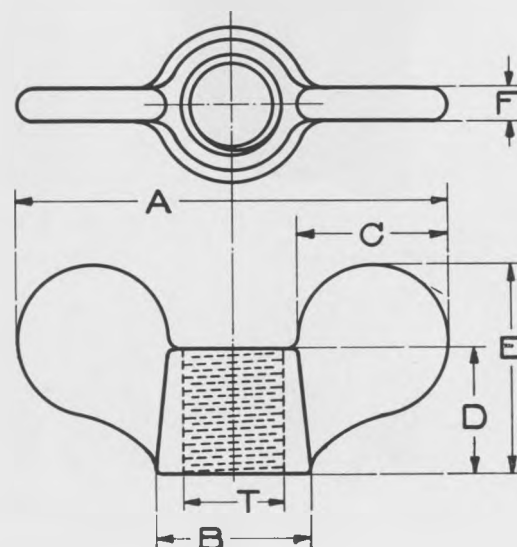
DROP FORGED THUMB NUTS BLANK OR TAPPED

BILLINGS' CARBON STEEL THUMB NUTS are drop forged from special analysis steel which is produced to rigid specifications.

These drop forged thumb or wing nuts are furnished either blank or tapped. The blanks are tumbled smoothly, and the tapped nuts have the base faced at right angles to the hole, and those in stock are tapped with U. S. Std. threads.

When threaded thumb nuts are ordered, a commercial product tapped U. S. Std. is furnished, but when greater precision or a special thread is required, an additional charge consistent with the requirements will be made.

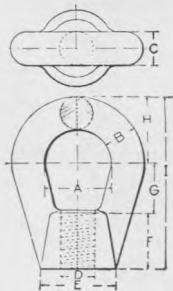
Special sizes and shapes and tobin bronze wing nuts furnished to order.



Size	For Diameter Bolt	Threads per Inch U. S. Std.	DIMENSIONS						Size
			A	B	C	D	E	F	
00	{No. 6 (.138) No. 8D(.164)}	{32 32}	13/16	5/16	9/32	1/4	17/32	1/8	00
0	{No. 10 (.190) 3/16}	{24 24}	1 7/32	7/16	7/16	11/32	5/8	1/8	0
0 1/2	{No. 12 (.216) 1/4}	{24 20}	1 5/16	1/2	15/32	3/8	11/16	5/32	0 1/2
1	5/16	18	1 15/32	9/16	1/2	7/16	3/4	5/32	1
2	3/8	16	1 21/32	5/8	9/16	1/2	13/16	5/32	2
3	7/16	14	2 1/8	3/4	3/4	9/16	1	3/16	3
4	1/2	13	2 5/16	13/16	13/16	5/8	1 1/8	3/16	4
5	9/16	12	2 19/32	7/8	15/16	23/32	1 1/4	7/32	5
6	5/8	11	2 21/32	1	1 1/16	13/16	1 7/16	1/4	6
7	3/4	10	3 7/32	1 5/32	1 1/8	15/16	1 9/16	1/4	7

See discount sheet for special prices in quantity lots.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

**CARBON STEEL
DROP FORGED**

**DROP FORGED EYE NUTS
WELDLESS**

The Billings line of drop forged weldless eye nuts is used in a great variety of work where a swivel or tapped eye nut of great strength is required.

The blanks are smoothly tumbled, and the tapped eye nuts are carried in stock with U. S. Standard Threads. These nuts can be furnished in Whitworth, "V" or other threads at special prices.

Prices quoted on special swivels or weldless eye nuts on receipt of drawings or models and specifications.

Tobin bronze forged nuts are furnished for marine work from our regular dies or to order in quantities. Write for quotations.

DIMENSIONS

No.	Size Inches	A Inches	B Inches	C Inches	D Inches U.S. Std.	E Inches	F Inches	G Inches	H Inches	I Inches	No.
100	3/8	7/8	5/16	5/16	3/8 - 16	3/4	3/4	3/4	3/4	2 1/4	100
101	1/2	1 1/8	7/16	7/16	1/2 - 13	1	1	1	1	3	101
102	5/8	1 3/8	9/16	9/16	5/8 - 11	1 1/4	1 1/4	1 1/4	1 1/4	3 3/4	102
103	3/4	1 1/2	3/4	3/4	3/4 - 10	1 3/4	1 1/4	1 1/8	1 1/2	3 7/8	103
104	7/8	1 5/8	7/8	7/8	7/8 - 9	2	1 1/4	1	1 11/16	3 15/16	104
105	1	1 3/4	1	1	1 - 8	2 1/4	1 5/8	1 1/4	1 7/8	4 3/4	105
106	1 1/4	2	1 1/4	1 1/4	1 1/4 - 7	2 7/8	1 7/8	1 3/8	2 1/4	5 1/2	106
107	1 1/2	2 1/2	1 3/8	1 3/8	1 1/2 - 6	3 1/8	2 1/8	1 3/4	2 5/8	6 1/2	107

See discount sheet for special prices in quantity lots.

CAPACITY

No.	Size Inches	*Safe Working Load	*Minimum Breaking Strain	No.
100	3/8	2,300 Lbs.	9,200 Lbs.	100
101	1/2	4,500 "	18,000 "	101
102	5/8	7,350 "	29,400 "	102
103	3/4	13,250 "	53,000 "	103
104	7/8	18,000 "	72,000 "	104
105	1	23,550 "	94,200 "	105
106	1 1/4	36,750 "	147,000 "	106
107	1 1/2	44,500 "	178,000 "	107

* Note: Load capacities apply to Eye Nuts only and not to connecting bolt, the strength of which may depend upon type of steel and whether end is plain or threaded. If strength of connecting bolt is required, see load capacity of equivalent bolt size in Eye Bolt table, for bolts of carbon steel and threaded ends.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

BILLINGS INDUSTRIAL PRODUCTS

DROP FORGED THUMB SCREWS

THREADED

threaded **THUMB SCREWS**

CARBON STEEL
DROP FORGED

Drop forged from special analysis CARBON STEEL produced to rigid specifications. The Billings' standard line of Thumb Screws consist of the set and the shoulder patterns which are carried in stock in the sizes listed below.

The blanks are smoothly tumbled before threaded. When these thumb screws are ordered, a commercial product threaded U. S. Std. is furnished, but when greater precision or a special thread is required an additional charge consistent with the special requirements will be made.

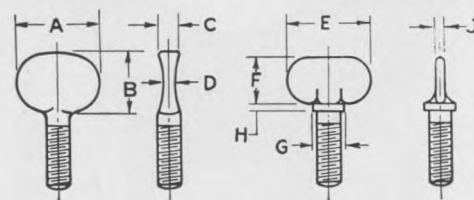
Intermediate lengths take the price of the next longer length plus an extra charge for cutting.

Unless otherwise specified, the set pattern — Type C — will be furnished.



TYPE C
SET PATTERN

TYPE F
SHOULDER PATTERN



Length Under Head	1/2	3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3	3 1/2	4
Diameter Threads per Inch U. S. Std.	ORDER SIZE BY NUMBER												
No. 10 (.190)	308	312	316	320	324	328	332						
1/4	408	412	416	420	424	428	432	436	440	444	448		
5/16	508	512	516	520	524	528	532	536	540	544	548	556	564
3/8	608	612	616	620	624	628	632	636	640	644	648	656	664
7/16	708	712	716	720	724	728	732	736	740	744	748	756	764
1/2	808	812	816	820	824	828	832	836	840	844	848	856	864

DIMENSIONS

Dia. & Thds. per Inch	A	B	C	D	E	F	G	H	J
#10 - (.190) - 24	25/32	5/8	3/16	1/16	3/4	1/2	9/32	5/64	7/64
1/4 - 20	1	23/32	1/4	3/32	1	9/16	3/8	3/32	1/8
5/16 - 18	1 1/8	27/32	9/32	1/8	1 1/8	5/8	7/16	3/32	1/8
3/8 - 16	1 9/32	15/16	9/32	1/8	1 5/16	11/16	1/2	1/8	5/32
7/16 - 14	1 15/32	1 1/16	11/32	5/32	1 15/32	13/16	9/16	5/32	1/8
1/2 - 13	1 5/8	1 5/32	13/32	7/32	1 9/16	7/8	5/8	5/32	11/64

See discount sheet for special prices in quantity lots.

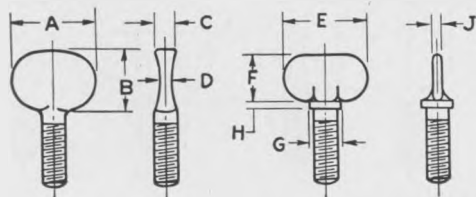
For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

CARBON STEEL DROP FORGED



TYPE C
SET PATTERN

TYPE F
SHOULDER PATTERN



Drop forged from special analysis CARBON STEEL produced to rigid specifications. The Billings' standard line of Thumb Screws consist of the set and the shoulder patterns which are carried in stock in the sizes listed below.

The blanks are smoothly tumbled.

When threaded thumb screws are ordered, a commercial product threaded U. S. Std. is furnished, but when greater precision or a special thread is required an additional charge consistent with the special requirements will be made.

Intermediate lengths take the price of the next longer lengths plus an extra charge for cutting.

Unless otherwise specified, the Set pattern — Type C — will be furnished.

Length Under Head	1/2	3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3	3 1/2	4
Diameter Threads per Inch U. S. Std.	ORDER SIZE BY NUMBER												
No. 10 (.190)	308	312	316	320	324	328	332						
1/4	408	412	416	420	424	428	432	436	440	444	448		
5/16	508	512	516	520	524	528	532	536	540	544	548	556	564
3/8	608	612	616	620	624	628	632	636	640	644	648	656	664
7/16	708	712	716	720	724	728	732	736	740	744	748	756	764
1/2	808	812	816	820	824	828	832	836	840	844	848	856	864

DIMENSIONS

Dia. & Thds. per Inch	A	B	C	D	E	F	G	H	J
#10 - (.190) - 24	25/32	5/8	3/16	1/16	3/4	1/2	9/32	5/64	7/64
1/4 - 20	1	23/32	1/4	3/32	1	9/16	3/8	3/32	1/8
5/16 - 18	1 1/8	27/32	9/32	1/8	1 1/8	5/8	7/16	3/32	1/8
3/8 - 16	1 9/32	15/16	9/32	1/8	1 5/16	11/16	1/2	1/8	5/32
7/16 - 14	1 15/32	1 1/16	11/32	5/32	1 15/32	13/16	9/16	5/32	1/8
1/2 - 13	1 5/8	1 5/32	13/32	7/32	1 9/16	7/8	5/8	5/32	11/64

See discount sheet for special prices in quantity lots.

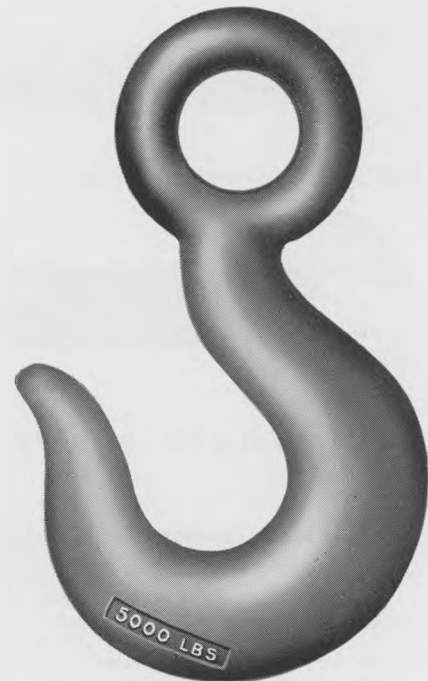
For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

HOIST HOOKS EYE PATTERNS — WELDLESS

CARBON STEEL

The Billings line of Drop Forged Hoist Hooks runs from small hooks with a safe working load of half a ton to the largest with a safe working load of 6.8 tons. On the top of each hook is forged its safe working load. In each case the load on which the hook will straighten out is approximately four times the safe working load and the elastic limit of these hooks is approximately twice the working load. Therefore, you have a factor of safety of from two to four hundred percent. The No. 27 hoist hook is recommended for safety chains on railroad cars.

Safe working load
forged on each hook



DIMENSIONS

No.	DIA. OF EYE		Size of Chain	Opening of Throat	EXTREME DIMENSIONS		CAPACITY — NET TONS			No.
	Inside	Outside			Length	Width	Safe Working Load	Average Load of Elastic Limit	Approx. Load Required to Straighten Out	
22	3/4	1 1/2	1/4	1	4 3/8	2 7/8	.5	.9	1.9	22
23	7/8	1 3/4	1/4	1 1/16	4 7/8	3 1/8	.6	1.2	2.3	23
24	1	2	5/16	1 1/8	5 3/8	3 1/2	.7	1.5	3.	24
25	1 1/8	2 1/4	3/8	1 1/4	6 3/16	3 7/8	1.2	2.5	5.7	25
26	1 1/4	2 1/2	7/16	1 3/8	6 7/8	4 3/8	1.7	3.5	7.	26
27	1 3/8	2 3/4	1/2	1 1/2	7 5/8	4 7/8	2.1	4.2	8.5	27
28	1 1/2	3	9/16	1 3/4	8 9/16	5 5/8	2.5	5.4	10.	28
29	1 5/8	3 1/4	5/8	1 7/8	9 9/16	6 3/8	3.	6.2	13.	29
30	1 3/4	3 1/2	11/16	2 1/16	10 3/8	6 7/8	4.	8.	17.	30
31	2	4	3/4	2 1/4	11 1/2	7 1/2	4.7	9.	19.	31
32	2 3/8	4 5/8	7/8	2 1/2	13	8 1/4	5.5	11.	26.	32
33	2 3/4	5 1/4	1	3	14 3/4	9 1/4	6.8	13.	32.	33

See discount sheet for special prices in quantity lots.

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

**CARBON STEEL
DROP FORGED**

BILLINGS' CARBON STEEL WRENCHES drop forged from special analysis steel which is produced to rigid specifications, openings milled or broached, surfaces and edges smooth, heads bright and clearly stamped showing class number, size and trade mark, hardened and finished with black CRACKLE ENAMEL baked on to provide greater protection for the wrench, better gripping qualities to the handle and a maximum resistance to wear.


WHITWORTH STANDARD

FINISH — BLACK CRACKLE ENAMEL WITH BRIGHT HEADS

Trade Number	B. & S. No.	Whitworth Standard Bolt Sizes	B S F. Standard Bolt Sizes	Nominal Openings	Length (Approx.)	Thickness of Heads	Trade Number
21	1101-W	1/8 & 3/16	— & 1/4	.338 & .448	4	1/4	21
22	1103-W	1/8 & 1/4	— & 5/16	.338 & .525	4 1/2	9/32	22
23	1107-W	3/16 & 1/4	1/4 & 5/16	.448 & .525	4 1/2	9/32	23
24	1108-W	3/16 & 5/16	1/4 & 3/8	.448 & .600	5	5/16	24
25	1112-W	1/4 & 5/16	5/16 & 3/8	.525 & .600	5 1/2	5/16	25
26	1114-W	1/4 & 3/8	5/16 & 7/16	.525 & .710	6	11/32	26
27	1118-W	5/16 & 3/8	3/8 & 7/16	.600 & .710	6 1/2	3/8	27
28	1119-W	5/16 & 7/16	3/8 & 1/2	.600 & .820	7	13/32	28
29	1123-W	3/8 & 7/16	7/16 & 1/2	.710 & .820	7	13/32	29
30	1124-W	3/8 & 1/2	7/16 & 9/16	.710 & .920	8	7/16	30
31	1128-W	7/16 & 1/2	1/2 & 9/16	.820 & .920	9	15/32	31
32	1129-W	7/16 & 9/16	1/2 & 5/8	.820 & 1.010	10	1/2	32
33	1132-W	1/2 & 9/16	9/16 & 5/8	.920 & 1.010	10	1/2	33
34	1134-W	1/2 & 5/8	9/16 & 11/16	.920 & 1.100	11	19/32	34
35	1136-W	9/16 & 5/8	5/8 & 11/16	1.010 & 1.100	11	19/32	35
36	1137-F	1/2 & 11/16	9/16 & 3/4	.920 & 1.200	12	19/32	36
36	1137-W	9/16 & 3/4	5/8 & 7/8	1.010 & 1.300	12	19/32	36
37	1140-W	5/8 & 3/4	11/16 & 7/8	1.100 & 1.300	12	19/32	37
38	1141-F	9/16 & —	5/8 & 13/16	1.010 & 1.390	14	3/4	38
38	1141-W	5/8 & 7/8	11/16 & 1	1.100 & 1.480	14	3/4	38
39	1146-W	3/4 & 7/8	7/8 & 1	1.300 & 1.480	14	3/4	39
40	1148-W	3/4 & 1	7/8 & 1 1/8	1.300 & 1.670	16	13/16	40
41	1150-W	7/8 & 1	1 & 1 1/8	1.480 & 1.670	16	13/16	41
42	1151-W	7/8 & 1 1/8	1 & 1 1/4	1.480 & 1.860	17	15/16	42
43	1153-W	1 & 1 1/8	1 1/8 & 1 1/4	1.670 & 1.860	17	15/16	43
44	1154-W	1 & 1 1/4	1 1/8 & 1 3/8	1.670 & 2.050	20	1	44
45	1155-W	1 1/8 & 1 1/4	1 1/4 & 1 3/8	1.860 & 2.050	20	1	45
46	1156-W	1 1/8 & 1 3/8	1 1/4 & 1 1/2	1.860 & 2.220	20	1	46
47	1157-W	1 1/4 & 1 3/8	1 3/8 & 1 1/2	2.050 & 2.220	23	1 1/16	47
48	1158-W	1 1/4 & 1 1/2	1 3/8 & 1 5/8	2.050 & 2.410	23	1 1/16	48
49	1159-W	1 3/8 & 1 1/2	1 1/2 & 1 5/8	2.220 & 2.410	23	1 1/16	49

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

15° ANGLE DOUBLE HEAD CARBON STEEL — THIN

15° angle
thin head **CHECK NUT**

WHITWORTH

BILLINGS' CARBON STEEL WRENCHES drop forged from special analysis steel which is produced to rigid specifications, openings milled or broached, surfaces and edges smooth, heads bright and clearly stamped showing class number, size and trade mark, hardened and finished with black CRACKLE ENAMEL baked on to provide greater protection for the wrench, better gripping qualities to the handle and a maximum resistance to wear.



FINISH — BLACK CRACKLE ENAMEL WITH BRIGHT HEADS

DROP FORGED

Trade Number	B. & S. Number	Whitworth Standard Bolt Sizes	B.S.F. Standard Bolt Sizes	Nominal Openings	Length (Approx.)	Thickness of Heads	Trade Number
623	1350-W	3/16 & 1/4	1/4 & 5/16	.448 & .525	4 1/2	11/64	623
624	1351-W	3/16 & 5/16	1/4 & 3/8	.448 & .600	4 1/2	11/64	624
625	1352-W	1/4 & 5/16	5/16 & 3/8	.525 & .600	4 1/2	11/64	625
626	1353-W	1/4 & 3/8	5/16 & 7/16	.525 & .710	5 1/2	3/16	626
627	1354-W	5/16 & 3/8	3/8 & 7/16	.600 & .710	5 1/2	3/16	627
628	1355-W	5/16 & 7/16	3/8 & 1/2	.600 & .820	5 1/2	3/16	628
629	1356-W	3/8 & 7/16	7/16 & 1/2	.710 & .820	7	7/32	629
630	1357-W	3/8 & 1/2	7/16 & 9/16	.710 & .920	7	7/32	630
631	1358-W	7/16 & 1/2	1/2 & 9/16	.820 & .920	7	7/32	631
632	1359-W	7/16 & 9/16	1/2 & 5/8	.820 & 1.010	8 1/2	1/4	632
633	1360-W	1/2 & 9/16	9/16 & 5/8	.920 & 1.010	8 1/2	1/4	633
634	1361-W	1/2 & 5/8	9/16 & 11/16	.920 & 1.100	8 1/2	1/4	634
635	1362-W	9/16 & 5/8	5/8 & 11/16	1.010 & 1.100	10 1/2	9/32	635
636	1363-F	1/2 & 11/16	9/16 & 3/4	.920 & 1.200	10 1/2	9/32	636
636	1363-W	9/16 & 3/4	5/8 & 7/8	1.010 & 1.300	10 1/2	9/32	636
637	1364-W	5/8 & 3/4	11/16 & 7/8	1.100 & 1.300	10 1/2	9/32	637
638	1365-F	9/16 & —	5/8 & 13/16	1.010 & 1.390	12 1/2	13/32	638
638	1365-W	5/8 & 7/8	11/16 & 1	1.100 & 1.480	12 1/2	13/32	638
639	1366-W	3/4 & 7/8	7/8 & 1	1.300 & 1.480	12 1/2	13/32	639
640	1367-W	3/4 & 1	7/8 & 1 1/8	1.300 & 1.670	12 1/2	13/32	640

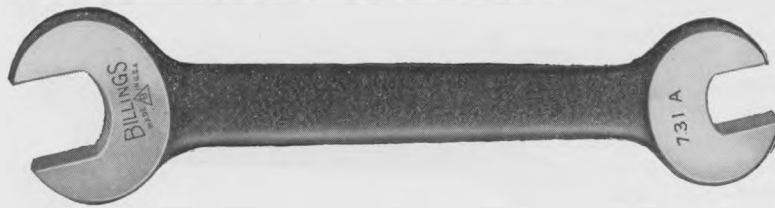
FINISH — BLACK CRACKLE ENAMEL WITH BRIGHT HEADS

METRIC

Trade Number	B. & S. Number	Nominal Opening M/M	Length (Approx.)	Thickness of Heads	Trade Number
623	1350-M	10 & 12	4 1/2	11/64	623
624	1351-M	10 & 14	4 1/2	11/64	624
625	1352-M	12 & 15	4 1/2	11/64	625
626	1353-M	13 & 16	5 1/2	3/16	626
627	1354-M	14 & 17	5 1/2	3/16	627
628	1355-M	15 & 18	5 1/2	3/16	628
629	1356-M	16 & 19	7	7/32	629
—	1356X-M	17 & 22	7	7/32	—
630	1357-M	18 & 20	7	7/32	630
631	1358-M	18 & 21	7	7/32	631
632	1359-M	20 & 22	8 1/2	1/4	632
632-X	1359X-M	21 & 23	8 1/2	1/4	632-X
633	1360-M	22 & 25	8 1/2	1/4	633
634	1361-M	23 & 26	8 1/2	1/4	634
635	1362-M	22 & 28	10 1/2	9/32	635
636	1363-M	24 & 28	10 1/2	9/32	636
637	1364-M	28 & 30	10 1/2	9/32	637

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

**METRIC CARBON STEEL
DROP FORGED—**



BILLINGS' CARBON STEEL WRENCHES drop forged from special analysis steel which is produced to rigid specifications, openings milled or broached, surfaces and edges smooth, heads bright and clearly stamped showing class number, size and trade mark, hardened and finished with black CRACKLE ENAMEL baked on to provide greater protection for the wrench, better gripping qualities to the handle and a maximum resistance to wear.

FINISH — BLACK CRACKLE ENAMEL WITH BRIGHT HEADS

Trade Number	B. & S. Number	Nominal Openings M/M	Length (Approx.)	Thickness of Heads	Trade Number
721-A	1100A-M	6 & 8	3 1/2	7/32	721-A
721	1100-M	7 & 9	4	1/4	721
21	1101-M	8 & 10	4	1/4	21
722	1102-M	9 & 12	4 1/2	9/32	722
22	1103-M	10 & 11	4 1/2	9/32	22
723	1104-M	10 & 12	4 1/2	9/32	723
724	1106-M	10 & 14	5	5/16	724
725-B	1111-M	11 & 16	5 1/2	5/16	725-B
—	1111A-M	12 & 14	5 1/2	5/16	—
—	1111B-M	12 & 15	5 1/2	5/16	—
25	1112-M	12 & 16	5 1/2	5/16	25
—	1112A-M	13 & 15	5 1/2	5/16	—
—	1112B-M	13 & 16	5 1/2	5/16	—
726	1113-M	14 & 16	6	11/32	726
—	1113A-M	14 & 17	6	11/32	—
26	1114-M	14 & 18	6	11/32	26
—	1114A-M	15 & 18	6	11/32	—
728	1117-M	16 & 18	7	13/32	728
28	1119-M	16 & 19	7	13/32	28
729	1120-M	16 & 20	7	13/32	729
—	1120A-M	17 & 20	7	13/32	—
730	1121-M	17 & 22	8	7/16	730
730-A	1122-M	18 & 20	8	7/16	730-A
30	1124-M	18 & 21	8	7/16	30
731	1125-M	19 & 21	9	15/32	731
731-A	1126-M	20 & 22	9	15/32	731-A
31	1128-M	20 & 23	9	15/32	31
32	1129-M	21 & 23	10	1/2	32
732	1131-M	22 & 25	10	1/2	732
34	1134-M	22 & 28	11	19/32	34
734	1135-M	23 & 26	11	19/32	734
—	1135A-M	24 & 28	11	19/32	—
35	1136-M	25 & 30	11	19/32	35
—	1136A-M	26 & 29	11	19/32	—
36	1137-M	28 & 30	12	19/32	36
736	1139-M	28 & 33	12	19/32	736
37	1140-M	29 & 32	12	19/32	37
38	1141-M	32 & 35	14	3/4	38
40	1148-M	33 & 39	16	13/16	40
—	1149-M	35 & 38	16	13/16	—
41	1150-M	38 & 40	16	13/16	41
42	1151-M	42 & 45	17	15/16	42
44	1154-M	46 & 49	20	1	44
45	1155-M	46 & 50	20	1	45
47	1157-M	50 & 55	23	1 1/16	47

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

BILLINGS VITALLOY® FORGED WRENCHES

15° ANGLE — DOUBLE HEAD

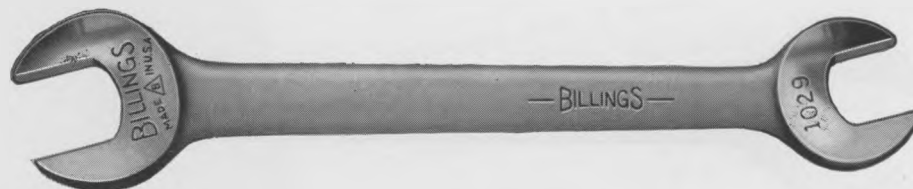
15° angle
double head

ENGINEERS'

The aristocrat of the wrench industry!

BILLINGS' VITALLOY® FORGED ENGINEERS' WRENCHES climax the experience, the workmanship, the on-the-job testing and the latest of engineering skills gleaned over more than three quarters of a century of wrench making. They are made from special analysis alloy steel, heat treated in modern controlled furnaces. Openings are clean, accurately shaped. Tapered jaws for cramped quarters. Heads are thin, skillfully engineered to proper thickness in all lengths. Sides of heads smooth and well rounded into handle. Class number, size and Billings' trade mark stamped on polished face. Each wrench has two different size openings. The wrench has a fine balance or "feel". VITALLOY® FORGED WRENCHES are lighter, stronger and made to last.

VITALLOY® FORGED METRIC



FINISH — HEAVY CHROME PLATE OVER COPPER AND NICKEL, HEADS POLISHED

Trade Number	B. & S. Number	Nominal Openings M/M	Length (Approx.)	Thickness of Heads	Trade Number
1020	1020-68	6 & 8	3 1/2	5/32	1020
1720	1720-79	7 & 9	4 1/2	11/64	1720
1723	1723-1011	10 & 11	5	3/16	1723
1725	1725-1113	11 & 13	5 3/4	7/32	1725
1025	1025-1214	12 & 14	6 1/4	15/64	1025
1727	1727-1416	14 & 16	6 3/4	17/64	1727
1027	1027-1517	15 & 17	7 1/2	9/32	1027
1029	1029-1820	18 & 20	8 1/4	5/16	1029
1030	1030-1921	19 & 21	9	11/32	1030
1733	1733-2224	22 & 24	10 1/4	3/8	1733
1034	1034-2325	23 & 25	11	13/32	1034
1735	1735-2628	26 & 28	12 1/2	15/32	1735
1735	1735-2729	27 & 29	12 1/2	15/32	1735
1037-A	1037A-3032	30 & 32	12 3/4	1/2	1037-A
1037-A	1037A-3133	31 & 33	12 3/4	1/2	1037-A
1039	1039-3436	34 & 36	14	9/16	1039
1039	1039-3537	35 & 37	14	9/16	1039
1041	1041-3840	38 & 40	16	11/16	1041
1041	1041-3941	39 & 41	16	11/16	1041

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

BILLINGS

VITALLOY
Trade Mark Registered

WRENCHES

VITALLOY® FORGED**METRIC**

Thin and light weight especially engineered and designed for hot motor tappet adjustment work. Handles correctly proportioned, jaws tapered, two different size openings each wrench accurately shaped. VITALLOY® FORGED from special analysis alloy steel, heat treated, heavy chrome plate and with heads polished.



FINISH — HEAVY CHROME PLATE OVER COPPER AND NICKEL, HEADS POLISHED

Trade Number	B. & S. Number	Nominal Openings M/M	Length (Approx.)	Thickness of Head	Trade Number
1090	1090-810	8 & 10	8 1/2	5/32	1090
1090	1090-911	9 & 11	8 1/2	5/32	1090
1090	1090-1214	12 & 14	8 1/2	5/32	1090
1092	1092-1517	15 & 17	9	3/16	1092
1094	1094-1618	16 & 18	9 1/2	7/32	1094
1094	1094-1921	19 & 21	9 1/2	7/32	1094
1096	1096-2022	20 & 22	10	7/32	1096
1096	1096-2325	23 & 25	10	7/32	1096
1096	1096-2426	24 & 26	10	7/32	1096

For Weights and Standard Packaging see Pages 5 to 13 or 90 to 98.

® Trade Mark Registered



BILLINGS **FORGINGS**

Each second a mighty blow so timed and delivered that it shapes as by magic the red hot bars in the skilled hands of the hammer men.

Here is all the craft of the ancient blacksmith — but with the speed and economy of modern practice. Here is a wealth of knowledge gained by over three quarters of a century of experience.

Billings has produced millions of drop forgings for the country's industries. These forgings have been forged on drop hammers made in our plant. There is no more reliable symbol of quality in drop forgings, as in wrenches, than the name "Billings".

MADE BY
THE BILLINGS & SPENCER CO.

HARTFORD, CONN. U.S.A.

MADE BY
THE BILLINGS & SPENCER CO.
HARTFORD  CONN. U.S.A.

PROGRESSIVE STEPS IN THE PRODUCTION OF A BILLINGS WRENCH

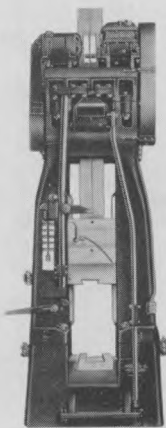


DIE MAKING

This work requires infinite care, experience and skill. Billings' die sinkers have at their command the finest equipment available for making precision dies. Quality wrenches can only be produced in precision dies.

BILLINGS' BOARD DROP HAMMERS

The Billings & Spencer Company, for decades, has not only produced quality drop forged wrenches and shop tools but has manufactured the hammers on which the forgings are made. Billings manufactures and uses, in the production of Billings' Wrenches and Tools, board drop hammers ranging from 800 to 6,500 pounds drop or falling weight. These massive hammers, 17 to 25 ft. in height and weighing 10 to 100 tons, are set on solid concrete foundations.



1. BAR STOCK

Billings' drop forged wrenches and shop tools are made from special analysis alloy steel and selected carbon steel. The first step is to cut the bar stock to the required length for the particular size wrench to be manufactured. This bar stock is inserted in an oil fired furnace and heated to approximately 2200° Fahrenheit. It is then ready for the first operation in forging.

2. FULLERING

This is the first step in the drop forging operation to produce a Billings' Wrench on a Billings' Board Drop Hammer. Fullering makes smaller that section of the forging which is to be the handle of the wrench.

3. EDGING

The metal is shaped and formed to the approximate size of the wrench. This is called edging.

4. BLOCKING OR FIRST IMPRESSION FROM THE DIES

In this operation the ultimate shape of the wrench first appears. The blocking impression imparts the first definite shape to the wrenches, directioning and positioning the fibre structure of the metal in the predetermined concentration of the grain density which the forging die was designed to obtain.



1



2



3



4

5. FINISHED FORGING OPERATION

The finishing operations bring the metal to the final desired shape and size, the dies being completely closed and the metal filling the entire die cavities. Excess metal called flash is forced into the gutters surrounding the die impressions.

6. ANNEALING

The forging is placed in automatic temperature controlled gas fired furnaces and the heat raised to the temperature required for annealing or softening the metal preparatory to the trimming or cutting off of the flashing and for machinability.

7. COLD TRIMMING

The flash is removed in a trimming press, using a special set of dies made to conform to the exact contour of the wrench.

8. TUMBLASTING

By centrifugal force, a Wheelabrator Tumblast Machine, using steel shot, hurls the shot at great velocity on the wrenches cleaning the surfaces.

9. GRINDING FLASH

The sharp edges and burrs caused by trimming the flash are removed by grinding.

10. STRAIGHTENING

The steps in the process to this point leaves the wrench in a slightly bent or twisted condition which must be straightened before further processing. This is done on a mechanical or hydraulic press in special straightening dies. The wrench is compressed until it is straightened, after which it is ready for further processing.

11. ROUGH POLISHING

Edges of the wrench handle and sides of the head are rough polished on special machinery in order to have all the geometric lines of the wrench blend.

12. DISCING

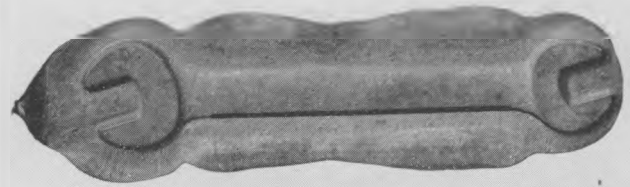
The face or the flat of the wrench heads are machine ground to proper thickness — to blue print dimensions and to meet U. S. Government standards. This is necessary before the stamping operation of the Billings' name, trade mark, wrench size and class number can be done.

13. STAMPING

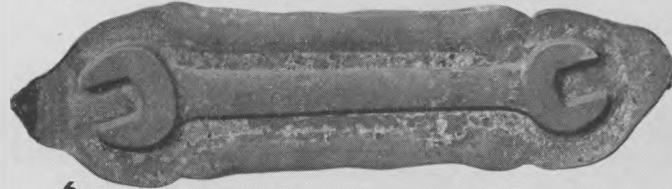
In order to have clear legible letters and figures this stamping operation requires expert workmanship and equipment. Hydraulic and Roll stamping presses are used.

14. BROACHING

This is one of the important steps in the manufacture of Billings' drop forged wrenches. The openings of Billings' wrenches are machine broached to very close tolerances and conform to U. S., Whitworth and millimeter Standards. The sides of the broached openings are clean, smooth — and are accurate to size. The results — Billings' drop forged wrenches accurately and snugly fit the size nuts, bolts and cap screws for which they are intended.



5



6



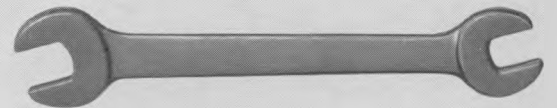
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10



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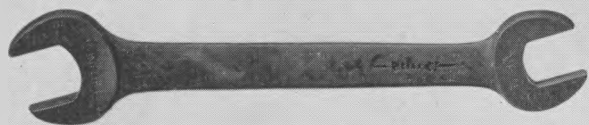
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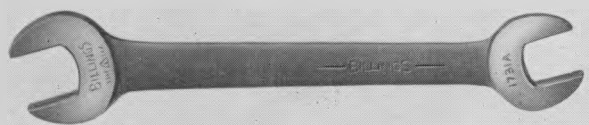
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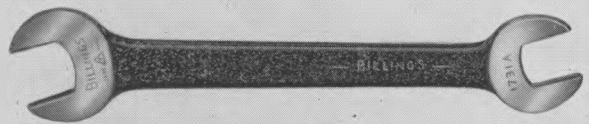
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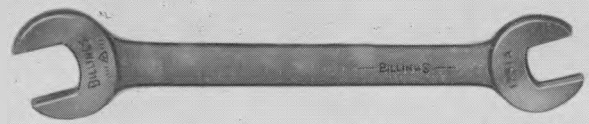
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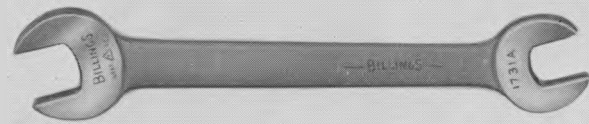
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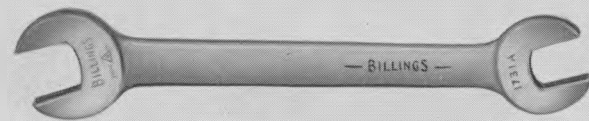
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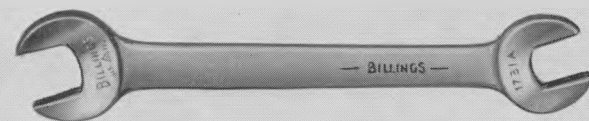
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20



21



22

15. HEAT TREATING

Correct heat treating is one of the most important production operations that molds the character of Billings' Wrenches. Heat treating equipment at Billings is modern and complete and does its part in maintaining the Billings' standard of quality. Control is automatic and precise. The result — every wrench treated has the physical properties exactly to Billings' rigid specifications.

16. TUMBLASTING

Tumbled in the Wheelabrator Tumblast Machine to clean the forgings after heat treating. The high velocity of the steel shot cleans the wrench of the oxides which are formed by heat treating and also imparts to the surface, greater fatigue resistance.

17. BLACK CRACKLE ENAMEL FINISH

BILLINGS' Carbon Steel Wrenches are sprayed with a special black enamel which is baked on the wrenches in electric ovens resulting in a Black Crackle Enamel Finish. Heads are then disk ground on both sides of the heads to remove the black enamel. A film of clear lacquer is applied to protect the bright heads. This unique finish — BLACK CRACKLE ENAMEL with bright heads — is pleasing in appearance, gives added protection to the wrench, provides better gripping qualities and maximum resistance to wear.

BILLINGS' VITALLOY® FORGED WRENCHES

require further production steps, some of which are shown below, in order to complete the finish of these quality wrenches.

18. FINISHED POLISH

Highly skilled workmen using special polishing machines with fine quality abrasives polish the face of the heads to a high lustre.

19. CHEMICALLY CLEANED

All oil, dirt, and handling marks must be removed chemically prior to plating. This is accomplished by immersing the wrenches into a tank containing the necessary chemicals.

20. COPPER PLATE

All Billings' Vitalloy® Forged Wrenches have a copper plating as an extra resistant against rust or corrosion. Over this copper base will be placed the final plating operations — nickel and chrome.

21. NICKEL

The wrenches are then bright nickel plated before the last and final finishing operation — a heavy chrome plate.

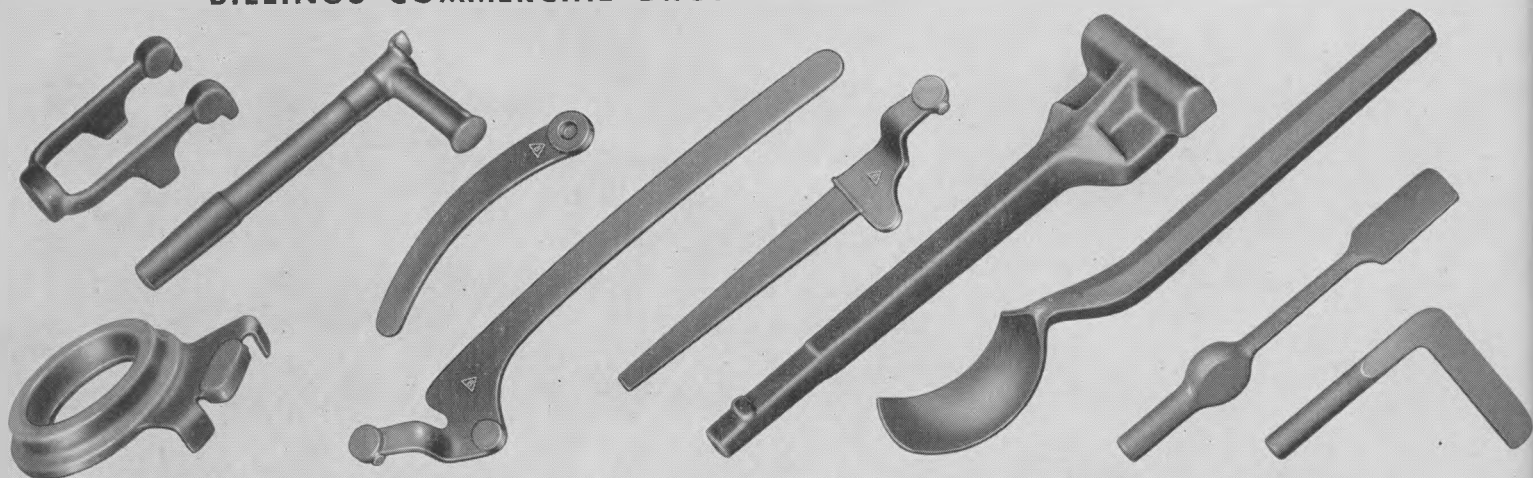
22. CHROME PLATE

A heavy chrome plate is then placed over the original copper base and the nickel plating to complete the Billings' Quality Finish.

88

® Trade Mark Registered

BILLINGS COMMERCIAL DROP FORGINGS FOR EVERY INDUSTRY



**CHART SHOWING NOMINAL OPENINGS OF WRENCHES
AND FITTING SIZES OF STANDARD BOLTS, CAP SCREWS AND NUTS**

Wrench Opening	Amer. Std. Heavy Nut (USS) Size Bolts	Amer. Std. Hex Head Cap Screw Dia. Screw	Amer. Std. Light Nut (SAE) Size Bolts	Amer. Std. Reg. Nut Size Bolts	Amer. Std. Machine and Stove Bolt Nuts	Wrench Opening
3/16	—	—	—	—	2 & 3	3/16
1/4	—	—	—	—	4	1/4
5/16	—	—	—	—	5 & 6	5/16
11/32	—	—	—	—	8	11/32
3/8	—	—	—	—	10	3/8
7/16	—	1/4	1/4	1/4	12	7/16
1/2	1/4	5/16	5/16	—	—	1/2
9/16	—	3/8	3/8	5/16	—	9/16
19/32	5/16	—	—	—	—	19/32
5/8	—	7/16	7/16	3/8	—	5/8
1 1/16	3/8	—	—	—	—	1 1/16
3/4	—	1/2	1/2	7/16	—	3/4
25/32	7/16	—	—	—	—	25/32
13/16	—	9/16	—	1/2	—	13/16
7/8	1/2	5/8	9/16	9/16	—	7/8
15/16	9/16	—	5/8	—	—	15/16
1	—	3/4	—	5/8	—	1
1 1/16	5/8	—	3/4	—	—	1 1/16
1 1/8	—	7/8	—	3/4	—	1 1/8
1 1/4	3/4	—	7/8	—	—	1 1/4
1 5/16	—	1	—	7/8	—	1 5/16
1 3/8	—	—	—	—	—	1 3/8
1 7/16	7/8	—	1	—	—	1 7/16
1 1/2	—	1 1/8	—	1	—	1 1/2
1 5/8	1	—	1 1/8	—	—	1 5/8
1 11/16	—	1 1/4	—	1 1/8	—	1 11/16
1 13/16	1 1/8	—	1 1/4	—	—	1 13/16
1 7/8	—	—	—	1 1/4	—	1 7/8
2	1 1/4	—	1 3/8	—	—	2
2 1/16	—	—	—	1 3/8	—	2 1/16
2 3/16	1 3/8	—	1 1/2	—	—	2 3/16
2 1/4	—	—	—	1 1/2	—	2 1/4
2 3/8	1 1/2	—	—	—	—	2 3/8
2 7/16	—	—	—	1 5/8	—	2 7/16
2 9/16	1 5/8	—	—	—	—	2 9/16
2 5/8	—	—	—	1 3/4	—	2 5/8
2 3/4	1 3/4	—	—	—	—	2 3/4
2 13/16	—	—	—	1 7/8	—	2 13/16
2 15/16	1 7/8	—	—	—	—	2 15/16
3	—	—	—	2	—	3
3 1/8	2	—	—	—	—	3 1/8
3 3/8	—	—	—	2 1/4	—	3 3/8
3 1/2	2 1/4	—	—	—	—	3 1/2
3 3/4	—	—	—	2 1/2	—	3 3/4
3 7/8	2 1/2	—	—	—	—	3 7/8
4 1/8	—	—	—	2 3/4	—	4 1/8
4 1/4	2 3/4	—	—	—	—	4 1/4
4 1/2	—	—	—	3	—	4 1/2
4 5/8	3	—	—	—	—	4 5/8
5	3 1/4	—	—	—	—	5

CARBON STEEL WRENCHES

Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

ENGINEERS' 15° ANGLE SINGLE HEAD

S000	46	6		1½
S00	46	6		1
00	46	6		1
0	46	6		1½
1	46	6		2¼
2	46	6		3½
3	46	6		5¾
4	46	6		6½
5	46	6		9¼
6	46	6	1	
7	46	6	1	8
8	46	6	1	14
8A	46	6	1	13½
9	46	6	2	4
10	46	2	3	4
10A	46	2	3	3
11	46	2	3	13
11A	46	2	3	13
12	46	2	5	3
12A	46	2	5	
13	46	2	6	8
13A	46	2	6	13
14	46	1	8	12
14A	46	1	8	12
15	46	1	13	
15A	46	1	13	4
16	46	1	16	6
16A	46	1	15	6
16B	46	1	15	12
17	46	1	18	
17A	46	1	19	8
18	46	1	27	6
18A	46	1	27	13
19	46	1	34	13
19A	46	1	33	
19B	46	1	38	1
19C	46	1	36	2
20	46	1	47	6
20A	46	1	47	14
20B	46	1	47	14

ENGINEERS' 15° ANGLE DOUBLE HEAD

25	47	6		3½
27	47	6		6½
27B	47	6		6¾
28	47	6		10
29	47	6		9¾
29B	47	6		9¾
29C	47	6		8¾
31	47	6		15¼
31B	47	6		15
32B	47	6	1	2¼
33A	47	6	1	2¼
34	47	6	1	8
34A	47	6	1	7

Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

ENGINEERS' 15° ANGLE DOUBLE HEAD

36B	47	6	1	15
37	47	6	1	13
37A	47	6	1	12
39	47	2	2	8
39A	47	2	2	10
39B	47	2	3	
39C	47	2	2	14
41	47	2	3	15
41B	47	2	3	14
42A	47	2	5	12
43	47	2	5	10
44A	47	2	9	7
45	47	2	9	4
45A	47	2	8	9
47	47	2	12	4
47B	47	2	12	7
49	47	1	11	14
49A	47	1	12	

CONSTRUCTION 15° ANGLE SHORT TANG

S203	54	1		7¾
S203A	54	1		7¾
S204	54	1		7¼
S204A	54	1		7¾
S205	54	1	1	
S205A	54	1	1	15¾
S206	54	1	1	5
S206B	54	1	1	5
S207	54	1	1	7
S207A	54	1	1	7
S208	54	1	2	2
S208A	54	1	2	3
S209	54	1	3	1
S209A	54	1	2	14
S210	54	1	3	14
S210A	54	1	4	2
S211	54	1	7	3
S211A	54	1	6	12
S212	54	1	7	2

OFFSET HANDLE SOCKET

261A	55	6		1¼
261J	56	6		1¼
262D	55	6		2½
262H	56	6		2¾
263A	55	6		2¾
263D	55	6		2¾
263H	56	6		3¾
264A	55	6		3¼
265A	55	6		6
265D	55	6		5¾
265H	56	6		6¼
266D	55	6		8¼
266H	56	6		8¾
267A	55	6		9½
267D	55	6		9½
267H	56	6		9¾
268A	55	6	1	
268D	55	6	1	

Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

OFFSET HANDLE SOCKET

268H	56	6	1	½
268P	56	6	1	1
269A	55	6	1	¾
269H	56	6	1	7
270D	55	6	1	7
270S	55	6	1	6
271A	55	6	1	14
271D	55	6	1	13
271H	56	6	2	
273A	55	2	3	
273B	55	2	2	14
273H	56	2	2	15
274H	56	2	4	7
275A	55	2	4	6
275D	55	2	4	8
276A	55	2	6	13
276B	55	2	7	
276H	56	2	7	
277A	55	2	6	15
278A	55	1	8	11

CAR DOUBLE HEAD

367	61	1	1	5
367A	61	1	1	4
370	61	1	3	2
370A	61	1	3	2
370B	61	1	3	4
370C	61	1	3	
372A	61	1	4	4
373	61	1	4	1
376	61	1	4	9
376A	61	1	4	10
378A	61	1	6	
379	61	1	6	4
382	61	1	6	9
382A	61	1	6	10
383B	61	1	8	5
385	61	1	7	10
389	61	1	9	7
389B	61	1	9	12

FACE SPANNER

418	50	6		2¼
420	50	6		2½
422	50	6		3½
424	50	6		4½
426	50	6		6
428	50	6		7½
430	50	6		8
432	50	6		9¼
434	50	6		10½
436	50	6		11
438	50	6		12½
440	50	6		15½
442	50	6		15¾



CARBON STEEL
WRENCHES

Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt. Lbs.	Ozs.
PIN SPANNER				
452	50	6		1 1/4
453	50	6		1 1/2
454	50	6		1 3/4
455	50	6		2 1/2
456	50	6		3
457	50	6		3 3/4
458	50	6		5
459	50	6		5 1/4
460	50	6		7
461	50	6		7 3/4
462	50	6		9 1/2
463	50	6		11
464	50	6		13

SET SCREW
22 1/2° ANGLE SINGLE HEAD

500	51	6		1 1/2
501	51	6		1 1/4
502	51	6		2
503	51	6		3 1/2
504	51	6		5 1/2
505	51	6		7
506	51	6		10 1/2
507	51	6		14 3/4
508	51	6	1	6
509	51	6	1	9
510	51	6	2	7
511	51	6	2	4

SET SCREW
22 1/2° ANGLE DOUBLE HEAD

525	51	6		1
527	51	6		3
529	51	6		4
531	51	6		6 1/2
533	51	6		9 1/4
535	51	6		13 3/4
537	51	6	1	4
539	51	6	1	14
541	51	6	2	7

TOOL POST
DOUBLE HEAD

554	52	6		5
555	52	6		7 1/4
555B	52	6		7 1/4
555C	52	6		7
556	52	6		11 1/2

Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt. Lbs.	Ozs.
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TOOL POST
DOUBLE HEAD

556B	52	6		11 3/4
556C	52	6		11 1/4
557	52	6		14 1/4
562	52	6		10 1/2
563	52	6		13 3/4
563B	52	6		14 1/4
563C	52	6		14
563D	52	6		13 1/2
564	52	6		13
565	52	6		2 1/4
566	52	6	1	7
566B	52	6	2	2
567	52	6	2	2
567B	52	6	2	2
567C	52	6	2	2
568	52	6	3	3
568B	52	6	3	3
568C	52	6	4	7
568D	52	6	4	9

BOX
22 1/2° ANGLE SINGLE HEAD
SQUARE OPENING

580	53	6		3/4
581	53	6		3/4
582	53	6		2
583	53	6		2
584	53	6		2
585	53	6		4 1/4
586	53	6		4 1/4
587	53	6		7 3/4
588	53	6		13
589	53	6	1	3 1/2
590	53	6	1	8

CHECK NUT
15° ANGLE SINGLE HEAD

601	48	6		1 1/2
601A	48	6		1 1/2
602	48	6		2
602A	48	6		2
603	48	6		3
603A	48	6		3
604	48	6		3 3/4
604A	48	6		4
605	48	6		5 1/2
605A	48	6		5 1/4
606	48	6		7
606B	48	6		6 3/4
607	48	6		10 1/4
607A	48	6		9 1/2
608	48	6		15
608A	48	6		15 1/2
609	48	6	1	6
609A	48	6	1	4
610	48	6	2	6
610A	48	6	2	5

Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt. Lbs.	Ozs.
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CHECK NUT
15° ANGLE DOUBLE HEAD

623D	48	6		1 3/4
624A	48	6		1 3/4
624B	48	6		1 3/4
625	48	6		1 1/2
626S	48	6		2 3/4
627	48	6		2 3/4
629	48	6		5
629D	48	6		3
630B	48	6		4 3/4
630E	48	6		4 3/4
631	48	6		4 1/2
631A	48	6		4 1/2
632C	48	6		7 1/2
634A	48	6		7
634B	48	6		7 1/2
635D	48	6		13 3/4
637	48	6		13
637A	48	6		13
639	48	6	1	11
640A	48	6	1	9

ENGINEERS'
15° ANGLE SINGLE HEAD

700	46	6		1
701	46	6		2
702	46	6		3
703	46	6		5
704	46	6		7
705	46	6		10
706	46	6		15
707	46	6	1	7
709	46	6	2	6

ENGINEERS'
15° ANGLE DOUBLE HEAD

721	47	6		1
723	47	6		2
725	47	6		3
725A	47	6		3
725B	47	6		3
727	47	6		5
729	47	6		10
731	47	6		15
731A	47	6		14
731B	47	6		15
733	47	6	1	1
735	47	6	1	6

BOX
15° ANGLE SINGLE HEAD
HEX OPENING

801	53	6		1 3/4
801A	53	6		1 3/4
802	53	6		2 1/2
802A	53	6		2 1/2
803	53	6		3 3/4

CARBON STEEL WRENCHES

Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt. Lbs. Ozs.
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BOX 15° ANGLE SINGLE HEAD HEX OPENING

803A	53	6	3 1/4
804	53	6	4
804A	53	6	4 3/4
805	53	6	7
805A	53	6	7
806	53	6	9
806B	53	6	9 1/4
807	53	6	12
807A	53	6	11 3/4
808	53	6	1
808A	53	6	1
809	53	2	1
809A	53	2	1
810	53	2	2
810A	53	2	2
811	53	2	13
811A	53	2	11
812	53	2	4

STRUCTURAL LONG TANG OFFSET HEAD

901	54	1	4 1/4
901A	54	1	4 1/4
901B	54	1	4
902	54	1	4
903	54	1	9 1/2
903A	54	1	9 3/4
904	54	1	8 1/4
904A	54	1	9 1/2
905	54	1	2 1/4
905A	54	1	2 1/2
906	54	1	2
906B	54	1	1
907	54	1	13
907A	54	1	13
908	54	1	12
908A	54	1	12
909	54	1	4
909A	54	1	4
910	54	1	6
910A	54	1	6
911	54	1	8
911A	54	1	9
912	54	1	8

T HANDLE SOCKET HEX AND SQUARE OPENINGS

961A	57	6	1 1/2
961H	58	6	1 3/4
961J	58	6	1 1/2
962D	57	6	3

Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt. Lbs. Ozs.
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T HANDLE SOCKET HEX AND SQUARE OPENINGS

962H	58	6	3 1/2
963A	57	6	3 1/2
963D	57	6	3
963H	58	6	5 1/4
964A	57	6	5
965A	57	6	7 1/4
965D	57	6	7
965H	58	6	7
966D	57	6	10 1/4
966H	58	6	12
967A	57	6	11 1/2
967D	57	6	11 3/4
967H	58	6	11
968A	57	6	1
968D	57	6	1
968H	58	6	1
968P	58	6	1
969A	57	6	2
969H	58	6	11
970D	57	2	12
970S	57	2	10 1/2
971A	57	2	5
971D	57	2	4
971H	58	2	4
973A	57	2	3
973B	57	2	3
973H	58	2	3
974H	58	2	4
975A	57	2	4
975D	57	2	4
976A	57	1	6
976B	57	1	6
976H	58	1	4
977A	57	1	6
977P	58	1	7
977X	58	1	6
978A	57	1	7

VITALLOY® FORGED WRENCHES

ENGINEERS' 15° ANGLE DOUBLE HEAD

1019	23	6	1/4
1020	23	6	1/2
1025	23	6	1 1/2
1027	23	6	4
1027B	23	6	4
1028	23	6	5
1029	23	6	6 1/4
1029B	23	6	5
1029C	23	6	5
1031	23	6	8 1/4
1031B	23	6	9
1032B	23	6	11
1033A	23	6	11
1033C	23	6	14
1034	23	6	13 3/4
1034A	23	6	13
1036B	23	6	1

Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt. Lbs. Ozs.
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ENGINEERS' 15° ANGLE DOUBLE HEAD

1037	23	6	1
1037A	23	6	2
1039	23	6	2
1039A	23	6	14
1039B	23	6	2
1039C	23	6	2
1041	23	2	3
1041B	23	2	3

TAPPET CHECK NUT 15° ANGLE DOUBLE HEAD

1090	24	6	2 1/2
1090A	24	6	2 3/4
1090B	24	6	2 1/2
1090C	24	6	2 1/2
1090D	24	6	2 3/4
1090E	24	6	2 1/2
1092	24	6	4 1/4
1092B	24	6	4 1/4
1092D	24	6	4
1092F	24	6	4
1094	24	6	5 1/2
1094A	24	6	5 1/4
1094B	24	6	5 3/4
1094D	24	6	5 3/4
1094F	24	6	5 1/4
1094G	24	6	5 1/4
1096	24	6	6 3/4
1096A	24	6	7 1/4
1096F	24	6	6 3/4
1096H	24	6	6 3/4
1096 Spec.	24	6	6 1/2

ELECTRICAL 15° AND 75° ANGLE

1112	25	12	1/4
1113	25	12	1/4
1114	25	12	1/4
1115	25	12	1/4
1116	25	12	1/4
1118	25	12	1/2
1120	25	12	1/2
1122	25	12	1/2
1124	25	12	1/2
1128	25	12	1
1132	25	12	1 1/4

COMBINATION BOX AND OPEN HEAD

1159	25	6	3/4
1159A	25	6	3/4
1160	25	6	1
1161	25	6	1 1/2
1162	25	6	2 1/4
1163	25	6	3 1/4
1163A	25	6	2 1/2



VITALLOY® FORGED WRENCHES

Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

COMBINATION BOX AND OPEN END

1164	25	6		3 1/2
1165	25	6		5
1166	25	6		6 1/2
1166A	25	6		6 1/2
1167	25	6		9 1/4
1167A	25	6		9 1/2
1168	25	6		14 3/4
1170	25	6	1	1
1171	25	6	1	8
1172	25	2	1	8
1173	25	2	2	2
1174	25	2	2	
1176	25	2	3	8

HOOK SPANNER ADJUSTABLE

1471	49	6		4
1472	49	6		7 1/2
1474	49	6		13 3/4
1476	49	2	2	4

ENGINEERS' 15° ANGLE DOUBLE HEAD

1720	23	6		3 3/4
1721	23	6		3 3/4
1723	23	6		1 1/4
1725	23	6		1 3/4
1725A	23	6		1 1/2
1725B	23	6		2 1/2
1727	23	6		3 1/4
1729	23	6		4 1/2
1731	23	6		6 1/4
1731A	23	6		7 3/4
1731B	23	6		7 1/2
1733	23	6		11
1735	23	6	1	3 1/2

BOX 15° ANGLE SHORT DOUBLE HEX

6025	26	6		2
6723	26	6		1
6725	26	6		1
6725A	26	6		2
6725B	26	6		2 1/4
6727	26	6		2 1/2

Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

BOX 15° ANGLE LONG DOUBLE HEX

7025	26	6		3 1/2
7027	26	6		7
7029	26	6		8 3/4
7029B	26	6		9
7031	26	6		11 3/4
7031B	26	6		13 1/4
7033A	26	6		13 1/4
7033C	26	6	1	
7034A	26	6	1	12
7037	26	2	2	8
7037A	26	2	2	8
7039	26	2	2	12
7039A	26	2	3	
7039B	26	2	2	14
7040B	26	2	3	2
7041	26	2	4	
7723	26	6		2
7725	26	6		2 1/2
7725A	26	6		3 1/2
7725B	26	6		3 1/2
7727	26	6		4 1/2
7727A	26	6		7 1/4
7729	26	6		6 3/4
7729A	26	6		10 1/2
7731A	26	6		10 1/2
7731B	26	6		12
7733	26	6		14
7735	26	2	2	
7735A	26	2	1	7
7742B	26	2	4	

BOX 45° ANGLE LONG DOUBLE HEX

8025	27	6		3 1/4
8027	27	6		6
8029	27	6		6 1/2
8029B	27	6		6 1/2
8031	27	6		11 3/4
8031B	27	6		11
8033A	27	6	1	
8033C	27	6	1	1 1/2
8034A	27	6	1	2
8037	27	2	2	
8037A	27	2	3	5
8039	27	2	3	5
8039A	27	2	3	5
8039B	27	2	3	5
8040B	27	2	6	4
8041	27	2	5	2
8045	27	2	8	8
8049	27	2	10	4
8053	27	2	14	8
8723	27	6		2
8725	27	6		2
8725A	27	6		2 3/4
8725B	27	6		3 3/4
8727	27	6		5
8727A	27	6		6
8729	27	6		5 3/4
8729A	27	6		7 1/2
8731A	27	6		9 1/4

Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

BOX 45° ANGLE LONG DOUBLE HEX

8731B	27	6		12
8733	27	6		14 3/4
8735	27	2	2	5
8735A	27	2	2	5
8742B	27	2	5	12

BOX 45° ANGLE SHORT DOUBLE HEAD

9025	27	6		3
9723	27	6		1 3/4
9725	27	6		2 1/4
9725A	27	6		3
9725B	27	6		3
9727	27	6		4 1/4

CARBON STEEL WRENCHES

SPANNER ADJUSTABLE MODEL L

0	49	6		3 1/4
1	49	6		7 3/4
2	49	6		9
3	49	6	1	4

ADJUSTABLE MODEL "G"

9"	62	1		14 1/2
11"	62	1	1	9
15"	62	1	3	1

TEXTILE DRAPER LOOM

DS-0	59	6		2
DS-2	59	6		3 1/4
DS-3	59	6		8 1/4
DS-4M	60	6		7 1/2
DS-5	59	2		7
DS-6M	59	1	3	
DS-7	60	2		4 3/4
DS-8	60	2		10
M-34	60	6		8 1/4
M-70	60	6		2 1/4
M-71	60	6		3 1/4

CARBON STEEL WRENCHES

Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

CHAIN PIPE "RED HEAD" REVERSIBLE

20	70	1	6	10
27	70	1	10	11
37	70	1	17	13
47	70	1	26	
57	70	1	38	
67	70	1	62	
87	70	1	130	

PIPE AND NUT COMBINATION

44-15"	62	6	5	
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MONKEY STEEL HANDLE

90-10"	63	6	1	12
90-12"	63	6	2	14
90-15"	63	6	4	4
90-18"	63	2	5	15
90-21"	63	1	7	12

GENUINE "COES" STEEL HANDLE

91-10"	63	6	2	8
91-12"	63	6	3	15
91-15"	63	6	5	6
91-18"	63	2	7	2
91-21"	63	2	10	2

VITALLOY® FORGED WRENCHES

Sets

ELECTRICAL LEATHERETTE ROLL

E-9	25	1		5
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TAPPET CHECK NUT PASTEBOARD BOX

46	24	1		15
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Wrench No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

TAPPET CHECK NUT LEATHERETTE ROLL

46	24	1		15
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TAPPET CHECK NUT PASTEBOARD BOX

47	24	1	1	11
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TAPPET CHECK NUT LEATHERETTE ROLL

47	24	1	1	10
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TAPPET CHECK NUT PASTEBOARD BOX

48	24	1	1	15
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TAPPET CHECK NUT LEATHERETTE ROLL

48	24	1	2	
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ENGINEERS' LEATHERETTE ROLL

1006	15	1	2	4
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ENGINEERS' LEATHERETTE ROLL

1009	15	1	2	9
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COMBINATION LEATHERETTE ROLL

1106	16	1	1	12
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COMBINATION LEATHERETTE ROLL

1109	16	1	3	12
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BOX 15° ANGLE LEATHERETTE ROLL

7706	17	1	2	2
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BOX 45° ANGLE LEATHERETTE ROLL

8706	17	1	2	
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VITALLOY® FORGED WRENCH BOARD ASSORTMENTS

No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

COMBINATION BOX AND OPEN HEAD

C-37	19	1	17	2
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BOX 45° ANGLE DOUBLE HEAD

B-40	20	1	17	13
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BOX 15° ANGLE DOUBLE HEAD

B-42	20	1	18	13
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ENGINEERS' 15° ANGLE DOUBLE HEAD

E-52	19	1	17	9
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SOCKETS AND PARTS "HEAVY DUTY" SERIES ¾" SQ. DR.

H-24	22	1	34	13
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SOCKETS AND PARTS "CADET" SERIES ¾" SQ. DR.

C-48	21	1	13	14
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SOCKETS AND PARTS "STANDARD" SERIES ½" SQ. DR.

S-75	21	1	28	1
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VITALLOY® FORGED SOCKETS AND UNIT PARTS

¾" SQUARE DRIVE

CB-110	29	10		1½
C-118	29	5		7
C-128	29	5		4¾
C-133	29	5		1¾
C-135	29	5		2½

**VITALLOY® FORGED
SOCKETS AND
UNIT PARTS**

No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

3/8" SQUARE DRIVE

C-138	29	5	4 1/4
C-147	29	1	9 1/2
CP-150	29	5	7 1/2
C-157	29	1	7 3/4
CS-160	29	5	2 1/4
C-180	29	5	1 1/2
C-1017	29	2	15 3/4
C-1212	28	10	3 3/4
C-1214	28	10	3 3/4
C-1216	28	10	3 3/4
C-1218	28	10	1
C-1220	28	10	1
C-1222	28	10	1 1/2
C-1224	28	10	1 1/2
CD-1214	28	5	1 3/4
CD-1216	28	5	2 1/4
CD-1218	28	5	2 1/4
CD-1220	28	5	2 1/2
CD-1222	28	5	3 1/4
CD-1224	28	5	3 1/2
CU-1212	28	5	1
CU-1214	28	5	1 1/4
CU-1216	28	5	1 1/2
CU-1218	28	5	1 1/4
CU-1220	28	5	1 1/2
CU-1222	28	5	1 3/4
CU-1224	28	5	1 3/4
C-1312	29	5	5 3/4

1/2" SQUARE DRIVE

SB-110	34	10	5 1/4
S-135	34	5	4 3/4
SP-150	34	5	1 1/4
S-158	34	1	15 1/4
SC-160	34	5	1
S-180	34	5	3 1/2
S-814	33	10	1 1/2
S-816	33	10	2
S-818	33	10	2
S-820	33	10	2 3/4
S-824	33	10	3 3/4
S-1018	34	2	5
S-1112	34	5	1
S-1118	34	5	1
S-1211	34	5	10
S-1214	33	10	14 1/2
S-1216	33	10	1 1/4
S-1218	33	10	1 1/2
S-1219	33	10	1 1/2
S-1220	33	10	1 3/4
S-1222	33	10	1 1/2
S-1224	33	10	2 1/4
S-1225	33	10	2 1/4
S-1226	33	10	2 1/4
S-1228	33	10	2 1/2

No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

1/2" SQUARE DRIVE

S-1230	33	10	3 1/4
S-1232	33	10	4 1/4
S-1234	33	5	5 1/4
S-1236	33	5	5 1/4
S-1240	33	5	5 1/4
SD-1216	33	5	6 3/4
SD-1218	33	5	4 1/2
SD-1220	33	5	4
SD-1222	33	5	3 3/4
SD-1224	33	5	4 1/4
SD-1226	33	5	5 1/2
SD-1228	33	5	5 3/4
SD-1230	33	5	7
SD-1232	33	5	7 3/4
SD-1236	33	5	7 3/4
S-1310	34	5	9 1/2
S-1318	34	5	9
S-1410	34	1	14 3/4
S-1724	34	1	3
S-1730	34	5	2

3/4" SQUARE DRIVE

HB-110	41	2	13 1/2
H-138	41	2	1
SH-160	41	5	4
H-1121	41	2	3
H-1220	41	2	2 1/2
H-1234	41	5	10
H-1236	41	5	5 1/2
H-1238	41	5	6
H-1240	41	5	6 1/2
H-1242	41	5	8 1/4
H-1244	41	5	7 3/4
H-1246	41	5	10 1/4
H-1248	41	5	10 1/2
H-1250	41	2	10 1/2
H-1252	41	2	15
H-1254	41	2	15
H-1256	41	2	1
H-1258	41	2	1 1/2
H-1260	41	2	2 3/4
H-1264	41	2	6
H-1316	41	2	8
H-1421	41	1	4

**VITALLOY® FORGED
SOCKET SETS**

SH-32	40	1	49	
Metal Box				
CD-606	40	1	1	1
Pasteboard Box				
CU-607	40	1		12
Pasteboard Box				
C-608	31	1	1	3/4
Pasteboard Box				
C-608	31	1	1	15 1/2
Metal Box				
C-610	31	1	1	13
Pasteboard Box				
C-610	31	1	2	11 1/2
Metal Box				

No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

**VITALLOY® FORGED
SOCKET SETS**

C-615	32	1	7	4
Metal Box				
C-625	32	1	8	10
Metal Box				
SD-810	35	1	4	5
Pasteboard Box				
S-811	35	1	4	14
Metal Box				
S-811A	35	1	2	14
Pasteboard Box				
S-811A	35	1	4	8
Metal Box				
S-811B	36	1	3	15
Metal Box				
S-812	36	1	1	13
Pasteboard Box				
S-813	37	1	4	6
Pasteboard Box				
S-813	37	1	5	14
Metal Box				
S-816	37	1	6	7
Metal Box				
S-824	38	1	15	
Metal Box				
S-825	38	1	13	11
Metal Box				
H-1212	42	1	17	
Metal Box				
H-1217	42	1	33	
Metal Box				

**CARBON STEEL
SHOP TOOLS****"C" CLAMPS
MODEL AZ — HEAVY SERVICE**

0	64	1		4
1	64	1		8
1 1/2	64	1	1	8
2	64	1	3	4
3	64	1	6	12
4	64	1	9	5
5	64	1	12	13
6	64	1	18	
8	64	1	26	2
10	64	1	31	3
12	64	1	41	13

MODEL GS — GENERAL SERVICE

104	64	1	4	8
106	64	1	5	12
108	64	1	7	
110	64	1	8	9
112	64	1	11	15
115	64	1	15	6
118	64	1	19	12

CARBON STEEL SHOP TOOLS

No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

"Clamps"

MODEL AX — MACHINISTS

301	66	1		8
302	66	1	1	2
303	66	1	1	12
304	66	1	2	13

MODEL BB — BODY BUILDERS

402	65	1	1	2
403	65	1	1	11
404	65	1	2	6
406	65	1	3	11
408	65	1	5	13
410	65	1	8	3
412	65	1	12	1

MODEL SR — SPATTER RESISTING

402-S	65	1	1	2
403-S	65	1	1	11
404-S	65	1	2	6
406-S	65	1	3	11
408-S	65	1	5	13
410-S	65	1	8	3
412-S	65	1	12	1

STRAP CLAMP UNIVERSAL ADJUSTABLE

1	66	1	1	2 1/4
2	66	1	2	12
3	66	1	9	1

MODEL AU CLAMP DOG PARALLEL

1	67	1		8
2	67	1		12
3	67	1	1	8
4	67	1	3	9

MODEL AR LATHE DOG

1	67	1		3
2	67	1		5
3	67	1		9
4	67	1		15
5	67	1	1	9
6	67	1	1	15
7	67	1	2	13
8	67	1	3	6
9	67	1	5	6
10	67	1	7	
11	67	1	10	1
12	67	1	11	6
13	67	1	17	4

MODEL CK — LATHE DOG

1	67	1		4
2	67	1		5
3	67	1		8
4	67	1		15
5	67	1	1	10
6	67	1	2	
7	67	1	2	14
8	67	1	3	6
9	67	1	5	5
10	67	1	6	13
11	67	1	10	14
12	67	1	11	6
13	67	1	18	3

CARBON STEEL INDUSTRIAL PRODUCTS

EYE BOLTS PLAIN PATTERN BLANKS AND THREADED

40	74	1		1/2
41	74	1		1
42	74	1		3
43	74	1		4 1/2
44	74	1		5
45	74	1		6
46	74	1		13
47	74	1	1	5
48	74	1	1	11
49	74	1	2	
49 1/2	74	1	3	5

EYE BOLTS PLAIN PATTERN BLANKS AND THREADED

50	74	1	4	10
51	74	1	7	
52	74	1	10	2
53	74	1	15	6

EYE BOLTS SHOULDER PATTERN BLANKS AND THREADED

58	74	1		1/2
59	74	1		1
60	74	1		2
60A	74	1		3
61	74	1		8
61A	74	1		7
62	74	1		12 1/2
63	74	1	1	4
64	74	1	1	12
65	74	1	2	7
66	74	1	3	10
67	74	1	4	11
68	74	1	7	11

EYE BOLTS CABLE BLANKS AND THREADED

70	74	1		6
71	74	1		8
72	74	1	1	1

EYE NUTS BLANKS AND TAPPED

100	76	1		2
101	76	1		6
102	76	1		14
103	76	1	1	8
104	76	1	2	1
105	76	1	3	7
106	76	1	6	4
107	76	1	9	6

**VITALLOY® FORGED
SHOP TOOLS**

No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

**HAMMERS — BALL PEIN
MODEL AD AND BC**

5/0	43	6		6½
3/0	43	6		11¼
2/0	43	6	1	
0	43	6	1	4
1	43	6	1	6
2	43	6	1	13
4	43	2	2	6
6	43	2	2	15

**CARBON STEEL
INDUSTRIAL
PRODUCTS****HOIST HOOKS**

22	79	1		8
23	79	1		11
24	79	1		15½
25	79	1	1	10
26	79	1	2	2
27	79	1	2	15
28	79	1	4	9
29	79	1	5	11
30	79	1	8	8
31	79	1	10	2
32	79	1	13	13
33	79	1	18	6

ROD ENDS**BLANKS AND MILLED AND DRILLED**

0	72	1		1
1	72	1		2
2	72	1		3
3	72	1		4
4	72	1		6
5	72	1		8
6	72	1		13
7	72	1	1	5

No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

BLANKS AND MILLED AND DRILLED

8	72	1	1	14
9	72	1	2	11
71	72	1		½
72	72	1		1
73	72	1		1¼
74	72	1		2
75	72	1		3¼
76	72	1		6

**CARBON STEEL
SHOP TOOLS****SCREW DRIVERS — MODEL P**

20½	68	6		8½
21	68	6		10½
22	68	6		14¼

**SCREW DRIVERS — MODEL Z
OFFSET**

	68	12		1¾
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**CARBON STEEL
INDUSTRIAL
PRODUCTS****THUMB NUTS
BLANKS AND TAPPED**

				Per 100	
				Lbs.	Ozs.
00	75	1		17½	
0	75	1	2	5	
0½	75	1	3	5	
1	75	1	4	6	
2	75	1	6	5	
3	75	1	11	6	
4	75	1	14	5	
5	75	1	21	6	
6	75	1	29	3	
7	75	1	39	8	

No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

**THUMB SCREWS
BLANKS AND THREADED**

				Per 100	
				Lbs.	Ozs.
308	77	1	1	10¼	
312	77	1	2		
316	77	1	2	½	
320	77	1	2	3	
324	77	1	2	15½	
328	77	1	2	15	
332	77	1	3		
408	77	1	2	6½	
412	77	1	3	2½	
416	77	1	3	3½	
420	77	1	4		
424	77	1	4	3	
428	77	1	4	5	
432	77	1	5	3	
436	77	1	6	¼	
440	77	1	6	2¼	
444	77	1	6	4	
448	77	1	6	7	
508	77	1	4	5	
512	77	1	4	6½	
516	77	1	5	7¾	
520	77	1	6	5	
524	77	1	8	1¼	
528	77	1	7	½	
532	77	1	7	7½	
536	77	1	8		
540	77	1	10	4½	
544	77	1	10	8	
548	77	1	11	7	
556	77	1	12	8	
564	77	1	14	3¾	
608	77	1	7	7¼	
612	77	1	7	6½	
616	77	1	7	6¾	
620	77	1	9	6½	
624	77	1	10		
628	77	1	10	10	
632	77	1	12	8	
636	77	1	13		
640	77	1	13	4¼	
644	77	1	13	12	
648	77	1	14	2¼	
656	77	1	16		
664	77	1	17	3½	
708	77	1	10		
712	77	1	10	¼	
716	77	1	10	3	
720	77	1	10	7	
724	77	1	11	1½	
728	77	1	13	7½	
732	77	1	14	7	
736	77	1	15		
740	77	1	16	4¼	
744	77	1	19	10	
748	77	1	21	3½	
756	77	1	22		
764	77	1	23	7½	
808	77	1	15		
812	77	1	15	9	
816	77	1	16	¾	
820	77	1	16	1	
824	77	1	17		
828	77	1	19	3	
832	77	1	22	8¼	
836	77	1	23	9	

CARBON STEEL INDUSTRIAL PRODUCTS

No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

THUMB SCREWS BLANKS AND THREADED

			Per 100	
			Lbs.	Ozs.
840	77	1	25	5 $\frac{3}{4}$
844	77	1	25	6
848	77	1	25	7
856	77	1	26	9 $\frac{1}{2}$
864	77	1	27	11

CARBON STEEL SHOP TOOLS

No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

VICES — CHAIN PIPE

1	71	1	4	1
2	71	1	11	8
3	71	1	20	6
4	71	1	30	4

CARBON STEEL INDUSTRIAL PRODUCTS

No.	Cat. Page	Std. Pkg.	Approx. Wgt.	
			Lbs.	Ozs.

YOKE ENDS BLANKS — MILLED AND DRILLED — TAPPED, MILLED AND DRILLED

50	73	1		1 $\frac{1}{2}$
51	73	1		1
52	73	1		2
53	73	1		3
54	73	1		6
55	73	1		7
55 $\frac{1}{2}$	73	1		9
56	73	1	1	2
60	73	1		1
61	73	1		1
62	73	1		1 $\frac{1}{2}$
63	73	1		2
64	73	1		3
65	73	1		5
66	73	1		9
67	73	1		14

REINSTATED ITEMS

BILLINGS CARBON STEEL
AND
BILLINGS VITALLOY® STEEL

WRENCHES

OCTOBER 15, 1949

(Not shown in Billings Catalog 49)

WRENCH NUMBER	NOMINAL OPENING	WRENCH NUMBER	NOMINAL OPENING
Double Head Engineers' Wrenches — Carbon Steel		"T" Handle Socket Wrenches — Carbon Steel	
21	$\frac{5}{16}$ x $\frac{13}{32}$	977-B	$1\frac{7}{8}$
722	$\frac{5}{16}$ x $\frac{7}{16}$	979-A	$2\frac{3}{16}$
723-A	$\frac{3}{8}$ x $\frac{1}{2}$	979-B	$2\frac{1}{4}$
23	$\frac{13}{32}$ x $\frac{1}{2}$	980-A	$2\frac{3}{8}$
24	$\frac{13}{32}$ x $\frac{19}{32}$	Offset Socket Wrenches — Carbon Steel	
726	$\frac{1}{2}$ x $\frac{5}{8}$	277-B	$1\frac{7}{8}$
26	$\frac{1}{2}$ x $\frac{11}{16}$	279-A	$2\frac{3}{16}$
27-C	$\frac{9}{16}$ x $\frac{11}{16}$	279-B	$2\frac{1}{4}$
728	$\frac{9}{16}$ x $\frac{3}{4}$	280-A	$2\frac{3}{8}$
28-S	$\frac{5}{8}$ x $2\frac{5}{32}$	Double Head Engineers' Wrenches — Alloy Steel	
730	$\frac{5}{8}$ x $\frac{13}{16}$	1021	$\frac{5}{16}$ x $\frac{13}{32}$
30	$\frac{11}{16}$ x $\frac{7}{8}$	1023	$\frac{13}{32}$ x $\frac{1}{2}$
35	$\frac{31}{32}$ x $1\frac{1}{16}$	1723-A	$\frac{3}{8}$ x $\frac{1}{2}$
40	$1\frac{1}{4}$ x $1\frac{5}{8}$	1027-C	$\frac{9}{16}$ x $\frac{11}{16}$
42	$1\frac{7}{16}$ x $1\frac{13}{16}$	1028-S	$\frac{5}{8}$ x $2\frac{5}{32}$
44	$1\frac{5}{8}$ x 2	1030	$\frac{11}{16}$ x $\frac{7}{8}$
48	2 x $2\frac{3}{8}$	1035	$\frac{31}{32}$ x $1\frac{1}{16}$
Double Head Check Nut Wrenches — Carbon Steel		1040	$1\frac{1}{4}$ x $1\frac{5}{8}$
623	$\frac{13}{32}$ x $\frac{1}{2}$	15° Offset, 12-Point Box Wrenches Alloy Steel	
630	$\frac{11}{16}$ x $\frac{7}{8}$	7023	$\frac{13}{32}$ x $\frac{1}{2}$
634	$\frac{7}{8}$ x $1\frac{1}{16}$	7030	$\frac{11}{16}$ x $\frac{7}{8}$
632-X	$\frac{15}{16}$ x 1	7034	$\frac{7}{8}$ x $1\frac{1}{16}$
640	$1\frac{1}{4}$ x $1\frac{5}{8}$	Double Offset, 12-Point Box Wrenches Alloy Steel	
Double Head Set Screw Wrenches — Carbon Steel		8021	$\frac{5}{16}$ x $\frac{13}{32}$
523	$\frac{3}{16}$ x $\frac{1}{4}$	8023	$\frac{13}{32}$ x $\frac{1}{2}$
524	$\frac{3}{16}$ x $\frac{5}{16}$	8030	$\frac{11}{16}$ x $\frac{7}{8}$
526	$\frac{1}{4}$ x $\frac{3}{8}$	8731	$\frac{3}{4}$ x $\frac{13}{16}$
530	$\frac{3}{8}$ x $\frac{1}{2}$	8034	$\frac{7}{8}$ x $1\frac{1}{16}$
534	$\frac{1}{2}$ x $\frac{5}{8}$		



GENERAL TERMS

CATALOG NO. 49

Prices, Discounts and Terms are subject to change without notice and shall be those in effect on the date of shipment of each item.

TERMS OF PAYMENT:

Domestic — 2% 10th proximo, net 25th proximo.

Export — Payable in United States currency at par, New York City.

RETURNED GOODS POLICY: No merchandise may be returned without advance permission from our Main Office at Hartford, Connecticut.

Discontinued items cannot be returned and no credit will be allowed for same. A 10% handling charge will be made on all returned goods and will be deducted from your credit allowance.

A reconditioning charge will be made if goods returned have to be refinished for resale.

Credit allowance, when established, will be applied only against a new order for immediate shipment for twice the value of the credit.

Merchandise returned by permission must be forwarded transportation charges prepaid.

GUARANTEE: Every Billings & Spencer Tool is guaranteed against defective material and workmanship.

CONDITIONS OF ACCEPTANCE: Orders are subject to our acceptance and ability to ship. All agreements are contingent upon fires, strikes and any other conditions beyond our control.



THE BILLINGS & SPENCER CO., HARTFORD 1, CONN., U.S.A.

